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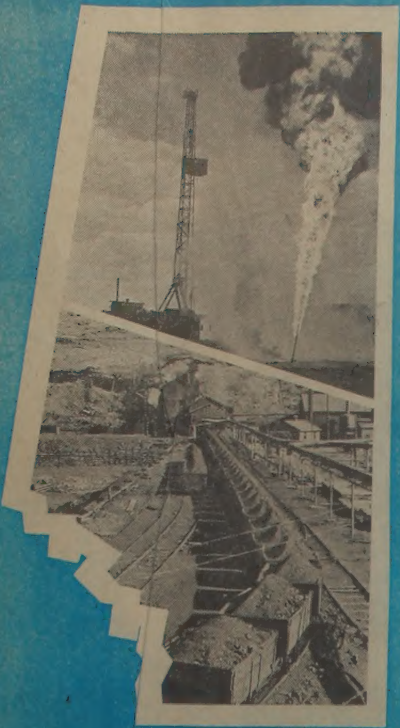
The Edmonton Journal
TUESDAY, FEBRUARY 3, 1970



SOARING INTO THE '70s

ALBERTA REVIEW & FORECAST

Alberta expects expansion in the Soaring Seventies

The Soaring Seventies hold the promise of tremendous economic expansion for Alberta.

There are some problems on the horizon, but these are primarily of adjustment to abundance. The opportunities and potential of the province make it one of the choicest areas on the globe in which to live during the coming years.

The opening year of the new decade will probably show a slower growth rate than 1969, as the federal government continues in its determined effort to halt the runaway inflation which hit an annual rate of five per cent in the final month of the last decade.

During the year, and throughout the rest of the decade, the major growth impetus will come from development of our huge storehouse of natural resources, particularly oil and gas and coal.

PAINFUL CHANGE

Agriculture, during this period, will have to make a number of painful readjustments. Many of the small family farms will disappear as economic units, although small holdings in the country may remain. These former agricultural workers will find employment in the medium sized towns and smaller cities, where the provincial government will likely encourage industry to settle.

The bulk of the population, probably about 80 per cent, will have settled in urban areas by that time, although steps may have been taken by then to limit the size of Edmonton and Calgary to about 600,000 persons in each centre.

If this happens, we will likely see the development of fairly large satellite towns, connected to the major centres by high-speed expressways and perhaps some new, as yet undeveloped forms of rapid transit.

SUBTLE CHANGES

Work, as we know it today, will have undergone some subtle changes. Many office workers will be able to perform a considerable amount of their duties from home, utilizing new developments in communication. The telephone will have become a highly sophisticated instrument by then, and will probably connect many homes with computer-controlled libraries and data banks scattered throughout North America.

Continued growth of electrification and the development of new, scientifically and technologically sophisticated manufacturing facilities will enable a better educated population to make better use of their time, create a world-wide demand for their products and attract a premium price for the unusual goods they will produce, both for home consumption and export.

Many of the more mundane, straight-forward manufacturing processes will have been relegated to computer control, requiring only occasional maintenance checkups. Trucks and railways will be required to distribute the goods, but more subtle methods of distribution will be under development.

MUCH THE SAME

In many industries, however, the work will be very much the same as it is today. New equipment, new techniques and new procedures will enable every individual to do considerably more work in an hour than he can today, and this will be reflected in increased wages.

Poverty, and the social problems which accompany poverty, will have been the subject of exhaustive study by all levels of government. While the problem may still be with us, it will be far less noticeable than today. Some form, or perhaps several alternative forms, will have been devised to put purchasing power in the hands of persons who, because of old age, physical or mental infirmities, youth, lack of education or earning power are unable to successfully maintain an acceptable standard of living.

MAJOR SHIFT

We will probably see some major changes in governmental organization. Hints of possible change has been coming out of Ottawa on a federal level, former provincial premier E. C. Manning has advanced some suggestions for changes at all government levels, and urban areas throughout the nation have been demanding change at the local, or civic government level.

While it is too early to tell what form these changes will take, it seems obvious that during the decade ahead we will see an increasing interaction between the public and the private sector of the economy. The already blurred line between the two will be obscured even further, and this may well be reflected in some subtle changes in laws governing property.

We will probably see the beginning of a shift to distribute private ownership of capital more widely, or toward increased public ownership. Canada in recent years has been tending toward the latter, socialistic course.

However, we are not likely to see any major disruption in corporate structures and the monetary system, although there will be a considerable increase in the use of credit cards and other forms of credit transactions.

TAXES HURT

If present proposed changes in taxation legislation are passed by Ottawa, we are likely to see an increase in foreign ownership of Canadian industry. Our major resource industries in the province are already controlled by outside groups and we continue to encourage money to come in as equity rather than debt capital.

Tax laws which would put pressure on small businessmen to merge with larger firms, coupled with tougher gift tax and inheritance tax laws all mitigate against Canadian ownership. In addition, American firms have some special advantages when bidding against Canadians, and can thus offer higher prices.

To date, most business attacks on the government's White Paper on Taxation have been negative. There have been few suggestions for changes which would promote growth of Canadian-owned industry while still ensuring Ottawa has funds for the social objectives it wishes to achieve. Whatever happens in the next few months in this area of legislation will have a decided impact on development of the total Canadian economy during the ensuing decade.

BOOM IN NORTH

Perhaps the most radical changes will occur in transportation and communication, particularly in the North. Coupled with new construction techniques, new building materials and a greater readiness to experiment than in any past decade, these developments will result in opening of the Northwest Territories and the Yukon, with subsequent economic benefits to Alberta, and Edmonton in particular.

The North will probably not support a large population, but we should see the development of a number of ultra-modern little communities serving to exploit the natural resources of the area and as tourist facilities to accommodate a growing number of visitors from below the border and abroad.

Tourism, in fact, may well be the major industry of Alberta by 1980. But in order to gain maximum benefit from this industry it will be necessary to retain vast areas of properly managed forest and parkland.

CHANGED VIEW

Our timber resources will receive even more attention than today, and the concept of renewable multi-purpose resources will have gained wide acceptance. The huge coal mines in the foothills to the west of Edmonton will ship large quantities of coal to Japan, but the scars left by these inroads will be handled in such a way that the land can be reclaimed and pollution will be kept to a minimum.

The Athabasca oil sands will be on their way to becoming North America's major energy supply. And they, too, will be developed with an awareness of pollution.

The same care and awareness of pollution will be shown by other industry. There will be a greater striving to maintain harmony between man and nature and a shift away from the present emphasis on unending growth.

These are a few of the things we could see develop in the next decade. But to make them come true it will require a lot of hard work by a lot of dedicated Albertans. The future's unlimited, and it's ours for the making.

CITY'S CENTRÁL CORE CHANGED RADICALLY IN 1960s
... but changes in 1970s will dwarf expansion of last decade

Slight cooling anticipated after sizzling pace in '69

The Alberta economy continued at a sizzling pace during 1969, and despite the usual anticipation of a slowdown, 1970 looks pretty good.

Petroleum and natural gas revenue set a new record, as did manufacturers shipments and construction. Only agriculture among the major growth segments of Alberta's economy showed any decline. Even in agriculture, livestock receipts were up slightly. The major problem area was wheat sales, which slumped sharply.

Mineral production, mainly oil and gas, was a record \$1,193,000,000 in 1969, up from \$1,091,749,049 in 1968. With anticipated sharp increases this year in coal exports, coupled with continued expansion of oil and gas sales, Alberta mineral production could well move into the number one slot, ahead of Ontario.

STILL TOPS

During 1969 Ontario mineral production reached \$1,214,000,000. However, while Alberta production increased over 1968 by about \$100,000,000, Ontario production decreased by nearly \$250,000,000. As a percentage of the Canadian total, Ontario accounts for 25.9 per cent and Alberta 25.4 per cent of mineral production.

Alberta manufacturers' shipments reached an impressive \$1,757,000,000, up from \$1,649,200,000 for 1968. By contrast, the 1959 shipments totalled \$850,300,000. These figures are for the first 11 months.

Alberta manufacturing, with the exception of fertilizer sales, plastics and chemicals, will not be seriously affected by economic factors outside the province. While our isolation restricts the immediate impact of slowdown elsewhere, it does tend to inhibit the growth of exports. The result in 1970 will be that growth of manufacturing will continue. Over the long term, however, there will be a shift toward more items of high unit value, which in turn will reduce the current insularity.

Most manufacturers blame — or praise — high freight rates for the current situation. As the value of production goes up in relation to its cost of production and distribution, transportation rates will play a decreasingly significant role. Frequent, consistent, and rapid transportation will become the primary concerns.

BUILDING UP

Construction in Alberta during 1969 climbed to \$1,561,000,000, up from \$1,465,000,000 in 1968. Building permits rose from \$434,714,000 in 1968 to \$441,143,000 last year. Residential and commercial construction were both up — about \$10,000,000 and \$13,000,000 respectively — while industrial, institutional and government building was down.

In the last half of the year, the federal government cut building incentives to areas of high growth such as Edmonton and Calgary. Both felt some impact. Edmonton's building permits were up by about \$5,000,000 only, while Calgary showed a decrease of about the same magnitude.

Construction in 1970 will probably be up slightly for the first quarter, remain steady for the next two and be off in the last.

Farm income for the first nine months of the year showed a drop of about 12 per cent, which is expected to carry through the last quarter of the year. However, labor income was up 15 per cent.

The impact on the economy is reflected in retail sales, which showed an increase of about 10 per cent, from \$2,000,000,000 to \$2,200,000,000.

Investment in Alberta also continued to rise rapidly during 1969. Public and private investment reached \$2,434,000,000, up from \$2,165,000,000 the previous year.

For 1970 Alberta Businessmen are mainly predicting a slowdown in the rate of expansion — but only the most pessimistic predict a levelling off or decline. The attitude of most is that Alberta has the best balance of any provincial economy and it would take a major disaster for Canada, and probably the United States, before we begin to feel a really serious pinch.

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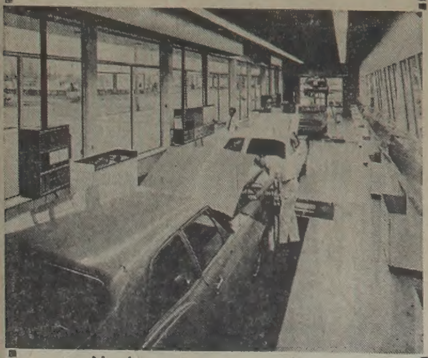

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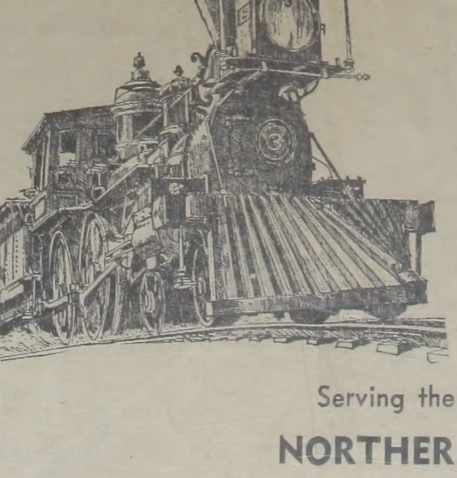

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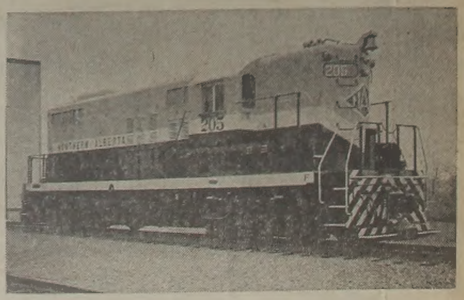

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NORTHERN ALBERTA RAILWAYS

Vast changes seen for city as dynamic decade unfolds

Edmonton will be a vastly different place in 1980 than it is today according to the city's industrial development department.

No one would ever accuse the industrial development department of being backward in promoting the city. And despite the fact many predictions seem "way out" the trends they see are based on solid research carried out by the various departments at city hall. Here, for example, is how they envisage a report to city council sometime in early 1980. . .

ANOTHER MILESTONE

Edmonton passed another milestone in its dramatic history of growth last month with the official opening of the rapid transit line to the city-operated Namao Industrial Airport.

The latest extension increases the total length of underground trackage to 32 miles, making Edmonton, with a population of 670,000, the leader in the world in the amount of rapid transit underground trackage per capita.

Connecting the northeast arm of the network to the Industrial Airport, three miles north of the city, provides air passengers arriving from the North with 10-minute service to the civic centre. The opening of the southwest entension to the Edmonton International Airport 18 miles south of the city, scheduled to take place late next spring, will give air travellers the added advantage of being able to change airports in 23 minutes to catch on-going flights.

The Edmonton Rapid Transit System, in a report to city council following the opening of the new link, says its other four lines are now operating at a slight profit.

HEAVY TRAFFIC

The northwest line, the report says, is carrying heavy numbers of commuters from the regional centres within the city as well as the traffic generated by the 15,000 student population on the University of Alberta's second campus at St. Albert.

The southwest arm, already working to near capacity with the University's main campus population of 45,000 and the commuter traffic from the regional centres to the southwest, will require additional trains when the International Airport service is added. The necessary equipment, the ERTS says, is now on order.

BETTER PICTURE

The third line, southeastward through the city's secondary industry section and then eastward the four miles to Sherwood Park, and the fourth line, westward through the city's west end regional centres and west of the city 10 miles to Spruce Grove, are carrying sufficient passenger traffic to warrant the capital investment, the company report says, and will show a much better economic picture as soon as the new regional centres on both lines are opened to residents.

Meanwhile, a study is being conducted into the feasability of a line northwest from the city to tie in the towns of Fort Saskatchewan and Redwater. The line would run through the heavy industrial section along with North Saskatchewan River.

The opening of the ERTS line to one airport and the prospects of having the other airport tied in by next summer have all but stilled advocates of a heliport at the old downtown Industrial Airport. The group has contended since the phase-out of the old airport began several years ago that land adjacent to the administration building should be retained as a heliport for airport-bound travellers.

LOST GROUND

The group lost considerable ground when the decision was made by city council to convert the administration building to an air museum. The ERTS service to the airports is another blow.

The last remaining argument hinges on the lack of direct transportation to the South Cooking Lake Amphidrone but an ERTS decision to extend the Sherwood Park line to Tofield and Riley, forty miles east of Edmonton and booming as commuter centres, would certainly service the seaplane base enroute.

Meantime, inauguration of the Namao service has not been without its minor problems.

ERTS officials admit that slight delays have been occurring in the downtown Transportation Centre's computerized luggage sorter. The heavy increase in baggage pallets being handled since the transit trains started hauling airline pallets to the terminal beneath the Sir Winston Churchill Square has overloaded the machine during peak periods.

ON ORDER

Officials say a larger model has been on order for some time and will be put into operation as soon as it arrives. The larger sorter was actually thought necessary to handle the deluge of pallets that will be arriving from the International Airport next summer when the ERTS line is completed.

What impact the pedestrian traffic from the two airports will have on the civic centre underground pedway system is a topic being considered by the city's planning department.

General feeling is that the mobile sidewalks in the 100th Street underground pedway will more than cope with the addition pedestrian traffic between the Transportation Centre, the 1,500-room Northerner Hotel, The Macdonald and the Chateau Lacombe. Traffic northward along the 100th Street pedway is not expected to increase appreciably until 1983 when the trans-continental turbo-trains go into service, providing overnight passenger service to Toronto and Montreal.

SOME CONGESTION

While the planners feel there will be some congestion at peak hours in the 99th Street pedway connecting the Transportation centre with Project '75, Chancery Hall, the courthouse and the Omniplex, they feel the opening of the six square block Environmental City project in the fall of 1981 will ease the pressure by providing alternate routes by pedway for Omniplex-bound hotel guests.

The annex being built on the two-block long strip of land north of the eight-year-old courthouse will not be ready for occupancy for two years and will not add to the congestion in the 99th Street pedway until after Environmental City provides relief. Even then the building will house only 400 to 500 office workers in its narrow eight-storey confines, already nicknamed "The Long Bar Of Justice."

OTHER ADDITIONS

Other additions taking place to the downtown area being watched by city planners are the three buildings which complete the $500,000,000 CN Air Space use plan west of 101st Street along the railroad's right-of-way. Most of the project has been completed for some time, only the trio of office towers between 101st Street and 107th Street still being under construction.

Planners are confident that intermediate stations along the west line of the ERTS will cope with the new influx of workers during rush hours. Most of the office personnel in the new buildings, in any case, will probably gravitate to living accommodation in the apartment towers in the city's midtown area, immediately west of the downtown section.

The midtown area, roughly bordered by 112th Street and 125th Street, stretches from the recreational area along the river bank to 107th Avenue on the north. While it is covered mostly with high-rise apartment towers, it is also the focal point for the city's nightlife because of the little knots of clubs, cabarets and specialty restaurants which have grown up in it as well as the fine assortment of boutiques sprinkled through it.

BEYOND CORE

While Edmonton's civic centre and the midtown area to the west are beehives of activity, the majority of the city's 670,000 people still live and work beyond the central core.

The meat processing industry, which has grown up in the northeast section of the city, continues to lead the country as the major shipping point for meat and meat products. It is one of the city's largest employers, particularly since the introduction of pre-packaged meats to supermarkets. With the elimination of the need for butchers in the supermarket retail outlets, these men have all become part of the meat packing industry, working right in the packing plants.

MAJOR EMPLOYER

Another of the city's major employers is still the oil industry. Not only have the vast stores of petroleum and natural gas north of the city spawned an army of workers for the allied petrochemical industry, but the city's position as supply point for the feverish activity between it and the Arctic creates jobs for a huge number of people in service and supply companies.

The 40-mile "Petrochemical Valley" stretching along both banks of the North Saskatchewan River from the city's eastern outskirts to Redwater grew as a combined result of the Edmonton region's abundant supply of natural gas and petroleum and the available supplies of non-expensive water and power.

Edmonton power, the city-owned utility which has just completed the final phase of its $26,000,000 Clover Bar power station, is now busily engaged in a program of test plants. The company wishes to compare the costs of producing power from natural gas, atomic energy and by the underground burning of coal.

NEW MILLS

Another major industry to Edmonton, although heavily automated, is the steel producing mills which have sprung up to take advantage of the low-cost waste coal being made available by the mining operations along the foothills of the Rocky Mountains west of Edmonton. The steel industry has also been responsible for the wide base of secondary industries which have made Edmonton their home over the past ten years.

Possibly the largest single factor contributing to Edmonton dramatic growth as an industrial centre has been its position in the middle of the population of Western Canada and its subsequent role as distribution centre for the West.

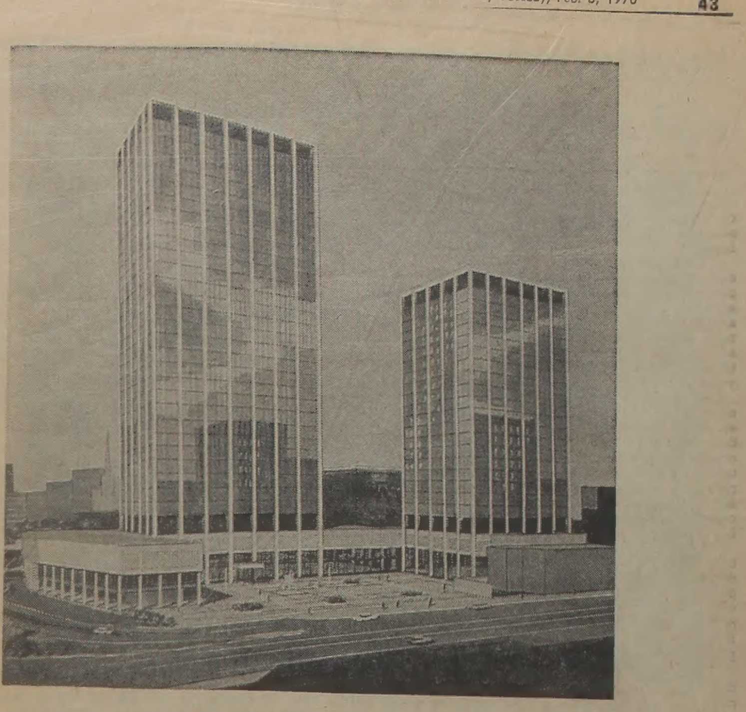
DISTRIBUTION CENTRE

The huge warehouses in the city's northwest and southeast corners have not only made the Canadian National Railway's freight shipments in the Edmonton region the heaviest anywhere in Canada but have resulted in tremendous numbers of highway frighters hauling to and from Edmonton.

The fact that the Yellowhead Head, officially opened less than 10 years ago, is now in the throes of being converted to a six-lane divided highway can be credited to Edmonton's lofty position among the major distribution centres on the continent.

Ringed by industry and refineries and served by two of the nation's busiest airports, Edmonton, with its 35 miles of river valley set aside for recreational use, has economic security and free-time enjoyment for its 670,000 citizens.

But Edmonton looks forward to 10 years of hectic growth and dramatic industrial development in the 1980s to make anything which has come before look pale by comparison.



ARTIST'S DRAWING OF FINISHED AGT-OXFORD COMPLEX
. . . a foretaste of things to come

Edmonton Water serves region

Water — the clear, pure stream of life for a rapidly urbanizing, ecological-conscious economic unit — will likely flow out from Edmonton to most communities in a radius of as much as 40 miles from the Alberta capital by 1980.

It appears to be a certain part of the future for one of the nation's most modern water preparation and distribution systems, already supplying Leduc, Sherwood Park and St. Albert, and about to supply Fort Saskatchewan and Redwater in 1970. The near future likely will see Stony Plain and Sprcce Grove co-operatively enter the system.

Edmonton Water is the transmission and distribution arm of the City of Edmonton Water Utility.

BUYS WATER

It purchases treated, ready-to-use water from a sister organization — Edmonton Power Generation and Water Treatment — and, through an ever-expanding system of primary and secondary mains, reservoirs, and other facilities, distributes it to more than 110,000 "customers" (individual installations) in metropolitan Edmonton and in neighboring communities.

It also provides water to number of neighboring insitutional facilities, including the Alberta Hospital at Oliver, the Namao Airport and Griesbach Barracks.

The organization employs 230 persons.

EMPLOY EXPERTS

Among these are professional engineers who constantly plan and execute expansions designed to keep the system's capabilities well ahead of demand; skilled technicians who install, maintain and repair or overhaul meters and other key mechanical equipment; experienced "trouble shooters" who, employing a large fleet of radio-equipped vehicles, investigate and correct difficulties as these difficulties occur; administrators and office personnel who cope with the massive amount of "paperwork" that goes with operating a major utility; and, of course, a substantial force of laborers who handle the machines-assisted physical task of installing, maintaining and repairing the system's vast network of service lines.

The city has three water treatment plants, with a combined capacity of 80,000,000 gallons per day — well in excess of peak demand, which in the summer, occasionally soars from a year-round average of 36,000,000 gallons a day to nearly 65,000,000. A new plant will ikely be added by 1973-74.

BASE LOAD

Two of these plants — No. 1 and No. 2 built in 1947 and 1956 respectively — are "base load" facilities (i.e., they operte year-round). No. 3, build in 1956, is used for summer peaking only.

In plants 1 and 2, water is treated in a series of open-air basins or tanks resembling an acre of swimming pools. These two plants convert raw river water into a high-quality consumer product in eight hours.

The peaking plant, No. 3, one of the first of its kind in Canada, employs a different treatment pattern.

Twlve filter units, each seven feet five inches high, are arranged around the outside walls of each of two Graver reactivators, much like a cartridge belt pulled tight around a bulging waistline. Each clarifying unit is of all steel construction, 86 feet in diameter.

In the Graver reactivator, the mixing of chemicals, flocculation, and clarification are all carried out in one unit. The total treatment time is 60 to 90 minutes.

Each of the two units in the peaking plant produces approximately 7,500,000 gallons per day.

After treatment, the water is collected and routed either into a covered, 5,000,000 gallon storage reservoir adjacent to the plant or directly into Edmonton Water's 1,100 mile-long primary distribution system, which will include three remote storage reservoirs, with a total capacity of 55,000,000 gallons by August 1970, with the introduction of Rosslyn Reservoir last November, and the introduction this summer of the Thorncliff Reservoir in Jasper Place.

Don Murray
President and General Manager

Don Murray, President and General Manager

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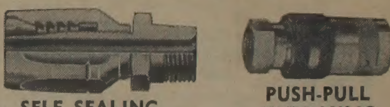

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Stores feel some slowdown, and anticipate rising costs

Retail stores have felt the cumulative effect of anti-inflationary restraints in 1969, but the result is a reduced buoyancy, not a business slump.

In a business like retailing, where it is claimed margins are narrow, increased costs are bound to be felt. Furthermore, some of the higher costs of recent buying have not yet been reflected by prices in the stores.

And some cost increases are not yet complete. That is, some increases in labor and materials costs will make themselves felt in future production and, in turn, in future buying by the stores. So rising costs have had an impact and will continue to affect prices for some time.

HOLD LINE

As they, in common with the rest of business and industry, have been asked to exercise restraint, retail stores will consequently find their profit margins being narrowed. They feel that responding to government appeals for price restraint will leave them walking a precariously fine line between profit and loss on each transaction.

Customers too have felt and will continue to feel the constricting pressures of anti-inflationary policies aimed at reducing spending. In 1970, as was increasingly the trend in 1969, they will probably find they can spend less freely than before the squeeze began.

All these factors are what contribute to the dampening effect on business activity expected by retail stores people in the coming year.

Nevertheless, it seems likely that business will continue to be buoyant for the stores. Less buoyant, as previously indicated. But buoyant.

CONTINUE STRONG

And those concerned with the stores are quietly confident that buoyancy will characterize the future of their sector of the economy in Alberta throughout the coming decade as well as in the year immediately ahead. This is almost bound to be so, because we live in a province where economic expansion and population growth will be continuing features for a long time ahead. Such an environment is one where stores can expect to continue to gain ground.

Retail stores have been experiencing the upsurge of new ideas that is common to industry today. New methods have already largely transformed retailing compared with a few years back. Though it is not possible to point to big new spectacular changes that are likely to dominate the next decade, the ferment of experimentation is expected to continue to work vigorously.

Having adjusted to things like mail order and neighborhood shopping, the traditional stores display confidence in their capacity to meet competition from say the discount houses. One reason given by some for this attitude is that changes in the precise nature of the place in which selling takes place will not in themselves greatly affect prices.

NOT AFFECTED

Significant costs (e.g., labor costs involved in stocking, or in the cutting of meat, etc.), according to this view, are not much altered by variations in the design and layout of the buildings in which the operations take place.

Customers, continues the argument, will decide for themselves where to shop and will be influenced by the over-all picture. Price will be a major factor affecting their decision. But it will be over-all price that will be decisive. The housewife, it is suggested, will ask herself, "where, over a period of time, shall I get the best range of prices?"

It will be interesting to watch how this debate is decided by the course of trading in the 1970's.

GROWING FEATURE

Consumer protection and the expression of consumer tastes and interests through consumer associations and organizations of all kinds are likely to be growing features of life in the 1970s. People in the retail stores trade expect statutory provision to be made for more precise labelling of goods and for more precision in descriptions used in advertisements. The department of consumer affairs is interested in having these subjects dealt with.

Many retailers would welcome action on these lines. Often the retailer has little or no control over what happens in this sphere. For instance, he has no say in how goods are described by manufacturers in TV advertisements.

In Europe and in the U.S.A., there is more regulation of many of these matters. In most countries consumer organizations are increasingly active.

Retailers expect consumer organizations and publications will increasingly inform and educate consumers and will thus contribute to the continuing trend for consumers to become more sophisticated and discriminiating in their tastes, and more quality and price conscious.

Dynamic industry

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Financial institutions enter new decade with uncertainty

Money costs, taxation and inflation are the three main woes of Alberta's financial community heading into the new decade.

Bankers and other financial experts are reluctant to make any long-term predictions. "Ask me about the next three days," was the comment of one when asked to predict the outlook for the first three months of 1970.

Bankers feel the federal government "request" that they postpone increasing credit charges, but still restrict loans is unrealistic.

Consumers who would normally borrow from the bank are being forced to go to small loan companies at higher interest rates, or pay department store carrying charges—also higher than bank rates. There has been no inhibition placed on consumer spending, they argue, and the only effect of the bank rate curb has been to increase the cost of money. This is inflationary, rather than deflationary.

SOME DELAYS

So far as businessmen are concerned, they are going ahead with necessary installations and passing the higher costs on to customers. There has, however, been a tendency to delay some projects in the hope that rates may go down.

The government restrictions have been on for the best part of a year now, and there is little question that in other areas of the country they are beginning to take effect. Alberta, with the most dynamic economy in the nation, is feeling the pinch to a lesser extent than other areas.

Investment dealers have mixed reactions, though there is general agreement that the first part of the year in Canada will be tight. Most feel there will be an easing trend toward mid-year.

Dominion Securities (Alberta) Ltd., notes that growth potential is high in the near term, but express concern about labor settlements.

"It is obvious that the provincial governments and the federal government, in dealing with their own employees, are going to be in a strategic position to set patterns for 1970," the firm says in its January review. "The automobile contract negotiations in the fall, and also the railway negotiations after that, may well decide if Canada will have relative price stability in 1971 and 1972, while earlier settlements will give clues to what these two very influential ones may turn out to be."

The firm says the economy is under better control than at the beginning of 1969 and "real progress has been made in precluding the emergence of international liquidity and exchange rates crises."

MIXED REACTIONS

The government attack on inflation is meeting with mixed reactions. In the McLeod, Young Weir monthly market review of January the firm notes:

"With real growth drastically slowed and price increases virtually unchecked, there is a growing school of thought which maintains that Canadian inflation is no longer wholly the result of either an imported cost-push or a domestic demand-pull, but may well be the consequence of bottlenecks which have developed at strategic points in the Canadian economy.

"Rising money incomes and rapid population growth, especially in the family, forming age group, have created a demand for certain categories of goods and services which cannot be supplied by present business and industrial capacity.

"If this theory is correct, then a general freeze on money supply and credit creation is clearly not the answer to the inflation problem. While restrictive policies are valid and important tools for controlling inflation, they must be applied selectively to allow productive capacity to expand; this expansion will increase the supply of goods and services to fill the excess demand, thus eliminating the necessity for further price increases."

McLeod, Young also notes:

SPENDING UP

"For 1970 total business capital spending in Canada has been projected at a level 14 per cent higher than in 1969, and expenditure to increase manufacturing capacity will run an estimated 30 per cent higher than last year. Only a reversal of the present tight-money situation will prevent the resultant new borrowing from driving interest rates even higher."

Nesbitt, Thompson, taking a look at the long term view, says that ". . .while the short term outlook may be clouded, few question the fundamental strength of the system, and the bright prospects of the early 1970s."

Most of the firms feel the White Paper on taxation will have long-term beneficial effects on Canadian securities generally. However, on the local level, because of the predominance of small business in Alberta and the heavy dependence on oil and gas and mining, there is considerable apprehension.

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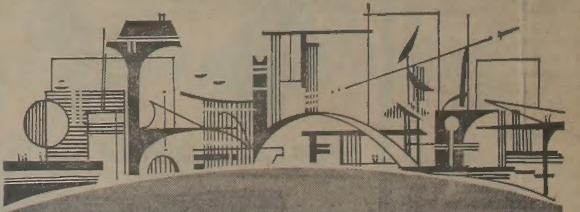

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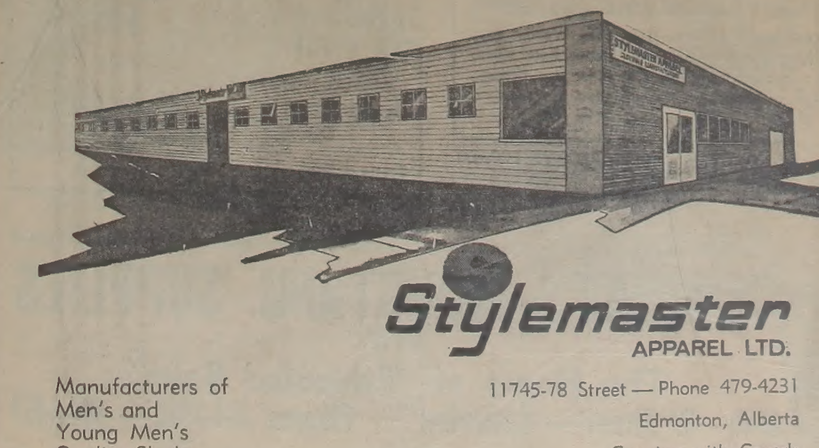

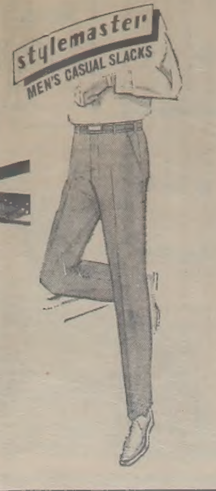

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Industry is required for Alberta's young

In preparing to look to the 1970s it is useful to take stock of the scene today and some trends that marked the 1960s.

Alberta, Canada's fourth largest province, measures 255,285 square miles. The 248,800 square miles of land surface supports a population which grew from 1,248,000 to 1,547,000 between 1959 and 1969. Density is six persons per square mile over-all and 12.4 per square mile in the settled area.

Of the total population 979,300 are aged under thirty-five, 783,000 under twenty-five and 523,300 under fifteen.

There is a fairly even division between 786,700 males and 760,300 females.

URBAN DWELLERS

If population increase continued at the same rate as in recent years, the total could exceed 2 million by the middle of the 1980s. Over 70 per cent of the population live in urban areas.

There are 10 cities, 101 towns, 168 villages, 30 counties, 18 municipal districts, 24 improvement districts and 2 special areas. City populations at 1969 (with 1959 figures in brackets following) were: Edmonton — provincial capital 431,719 (303,000), Calgary 369,025 (240,000), Lethbridge 38,749 (32,780), Red Deer 26,924 (17,593), Medicine Hat 25,713 (21,740), Grande Prairie 11,860 (7,410), Camrose 8,862 (6,042), Wetaskiwin 6,428 (4,836), Drumheller 5,240 (2,632), Lloydminster — Alberta portion 4,306 (2,800).

The province has over 94,000 miles of highways and roads and over 6,000 miles of main railway track.

NUMEROUS AIRLINES

Air communications with other parts of Canada and with the U.S.A. and Europe are highly developed and are served by numerous airlines.

Albertans use about 650,000 telephones and own over 780,000 vehicles, including more than 480,000 private cars.

Total personal income in the province rose from $1,660,000,000 in 1957 to $23,191,000,000 in 1967, in which period the personal income for Canada as a whole grew from $23,191,000,000 to $47,202,000,000. From 1957 to 1967 also income per head rose from $1,426 to $2,313 in Alberta compared with a rise from $1,396 to $2,313 in all Canada.

HEAVY INVESTMENT

Public and private investment at $1,514 per head adds up to more than $2,342,000,000 and represents 10.7 per cent of the Canadian total. The value of Alberta's retail trade in 1968 amounted to $2,028,000,000.

Based on 1968 figures, electric power plant capacity totalled 1,894,000 kilowatt hours and was expected to grow to 2,866, 000 KW by 1973.

These are some of the factors that show the generally lively state of Alberta's economic and social activity as the 1970s open.

LESS IMPORTANT

Till recently, agriculture dominated the Albertan economy. But its relative importance has diminished. Net value of agricultural production in 1958 was $358,362,000 out of a total of $1,494,941,000. In 1968 it was $600,000,000, but the total provincial net value of production was $2,910,000,000. In other words, agriculture's share had dropped from 24 per cent to 20.6 per cent.

The percentage of the labor force engaged in agriculture has fallen and within the industry the trend is toward fewer and larger units. These facts are reflected in population distribution trends.

RURAL FUTURE

The province's rural population declined from 545,564 in 1941 to 455,796 in 1966 while, in the same period, urban population increased from 250.605 to 1,007,407.

Noting these factors, provincial Industry and Tourism Minister Ray Ratzlaff says we have to look to industrialization to provide opportunities for the young. Industry is also needed as an economic base.

The large cities like Edmonton and Calgary will doubtless continue to grow, but he has a real interest in the small cities and towns. "They have — and must have — a future," he says. And he adds that the provincial government must help in this connection.

GOOD ENVIRONMENT

Mr. Ratzlaff argues that, while large urban centres in North America and elsewhere are experiencing great problems, there is an excellent environment in these smaller centres. Because of past programs, he continues, there are good roads, educational and recreational facilities, and so on. All the towns have good water, sewage disposal systems, etc. The infrastructures are good, so don't force the people to leave, he says.

As these small towns have been largely dependant on agriculture, the change in that industry has been putting a strain on them. So they must diversify. Small industry is needed. And he says manufacturers are not reluctant to go there, if labor is available.

Mr. Ratzlaff thinks local training facilities may be needed and that perhaps vocational schools would help.

Parochial attitudes locally may sometimes create difficulties, for example, from jealousies over the location of an industrial plant. To try to overcome this kind of problem, he is trying to work in a "larger area" concept. One idea he is trying is getting all the towns and villages in an area together, so that they can work on the problems jointly, as a zone.

Viewing Alaskan oil as no threat to our supplies because the demand is so great, Mr. Ratzlaff expects that more pipelines will be needed.

He and Jack Snary, director of the department's industrial development branch, lay great emphasis on the need to develop secondary industry in Alberta.

INCREASING NEED

Indeed, looking at the projections of population growth, Mr. Snary emphasizes that there is bound to be an increasing need for industrial development of all kinds, to keep pace. One way of helping meet the challenge is by training people in industrial development itself.

A course was held by the U of A department of extension last year and another is scheduled for June. Furthermore, discussions are taking place with the university's department of business administration and commerce on the possibility of establishing an industrial development degree course. Similar trends are afoot in the U.S. and clearly there is great value in fostering skills and knowledge in a field so fundamentally important to Alberta.

BIG EXPANSION

Metal fabricating, which expanded in value from $46,000,000 in 1958 to $95,000,000 in 1968, is in Mr. Snary's estimate, well placed for significant further expansion. To assist this, the department is going to produce an index of all the metal fabricating firms in Alberta. It can lead to further activity of the kind that has proved so satisfactory in the aircraft field, with Northwest Industries' contract for Lockheed.

Mr. Snary expects the already important trailer industry to make vigorous further progress in the 1970s. He sees Alberta as the leader in this growth industry.

Mr. Snary becomes as nearly lyrical as could be expected of an industrial development expert when he stresses the unrivalled attractions of living in Alberta in this era of wellbeing and the promise of expansion. Where else, he asks, could one enjoy these benefits and at the same time enjoy the space, beauty and richness of environment that the province affords?

Of course, he remarks, the one thing that could seriously affect the position would be the advent of a real slump. But he is cautiously optimistic that this will not arise. For one thing, he points out, industrial holdings are quite different now as compared to the 1930s. For instance, mutual funds have much bigger holdings now. So there is much more stability and more sophistication in meeting difficulties.

SOLID FOUNDATION

And Alberta has, says Mr. Snary, built up a good deal of strength in many directions as a result of past policies. There has been a high degree of "social investment" — in schools, hospitals, roads, etc., the benefit of which will be available on a continuing basis. But if they had not been built up, they might be the sort of things not possible in more difficult times.

An example of what has been achieved is that Alberta has enjoyed 50 per cent of the total of institutional construction in the four provinces of Western Canada.

Mr. Snary remains cautiously optimistic despite the fact that at present capital is short and credit difficult and expensive.

This is one of the factors that will make competition more fierce for both whatever capital there is and for new industry.

The expertise and facilities in the U of A in the field of computers and electronics can, in Mr. Snary's opinion, be a major asset. To them can be added the asset represented by the graduates in these and similar fields. This is an important consideration in an era when these sophisticated new industries bulk ever larger.

Another Albertan strength is likely to be the attractiveness of the province to those major industries seeking to relocate in a safe haven, where the people and the industry will be free from the strains and tensions associated with trouble spots elsewhere.

Yet another source of hope lies in Alberta's special relationship with the Canadian North.

In Mr. Snary's judgement the province can only benefit by becoming the main centre for aiding and supplying the developments that are likely to take place in the Northwest Territories and the Yukon in the decade immediately ahead and beyond.

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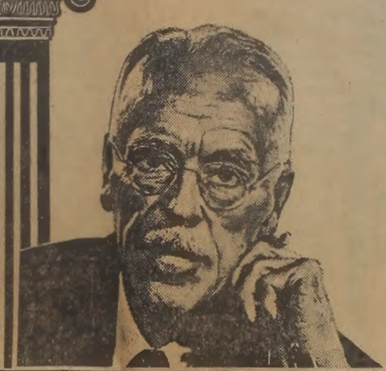
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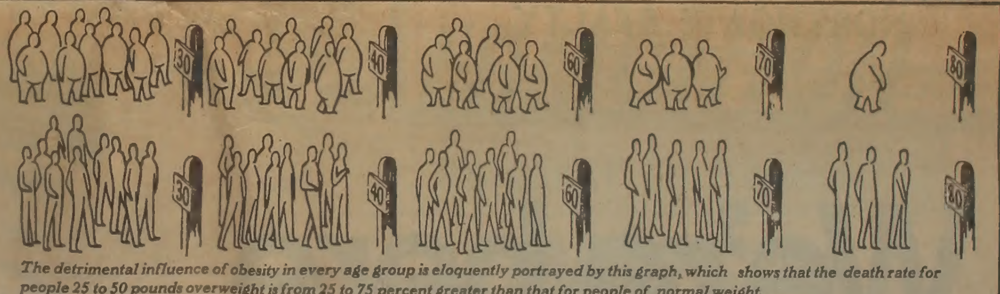

The detrimental influence of obesity in every age group is eloquently portrayed by this graph, which shows that the death rate for people 25 to 50 pounds overweight is from 25 to 75 percent greater than that for people of normal weight

SOMETHING TO THINK ABOUT . . .
You can be fat and live long, but the majority of fat people do not live so long. Life insurance and mortality statistics definitely point to the decreased longevity in persons with considerable overweight. What would I recommend to the average man to ward off heart disease? I think he ought to start in the early twenties and not gain a pound after he is 25. One is never too old to exercise a couple of times a week, or even once a week would be enough **Excerpts from "Wisdom Magazine" by DR. DUDLEY WHITE, M.D.**

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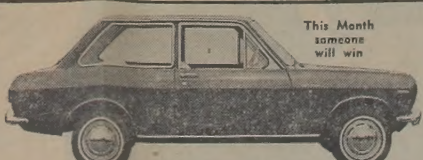
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Industrial base grows by 48 plants in 1969

Four new manufacturing plants were started in Edmonton every month during 1969 — one every 7.6 days.

The 48 new manufacturing plants were in addition to the 45 existing plants which made major additions or extension to facilities during the year to increase production capacities and add new lines to their production mix.

Edmonton's growing importance as a warehousing and distribution centre also contributed to the industrial construction picture with 72 new warehouse projects started and another 45 warehouses enlarged resulting in a total construction figure for warehouse buildings of more than $11,000,000.

The new plants not only deepened the city's already broad industrial base but added significant new producers.

DOUBLE MOVE

Kroehler Manufacturing Co. Ltd. of Naperville, Ill., not only made a start on their new $2,000,000 complex but purchased the existing upholstered furniture division of Canadian Bedding Company of Edmonton.

The double move, while making Edmonton the foremost producer of upholstered household furniture in Western Canada, also opened the way for Canadian Bedding to expand its Sealy Mattress operation and become the top manufacturer of the product in Canada.

The city's burgeoning construction industry came in for special attention with the opening of a $750,000 plant by Glaverbel Alberta Ltd., a division of Glaverbel S.A. of Brussels, Belgium. The new plant manufactures solar pane sealed unit windows in the Strathcona Industrial Park.

Also under the construction heading is the new $4,000,000 plant started by BACM Industries to manufacture gypsum wallboard as well as a number of smaller plants to manufacture folding doors, wood frame windows, pre-assembled cupboards, moulded counter tops and custom millwork. Another six plants supplying the construction industry made major expansion to facilities during the year.

INCREASED PLANT

Gendall Builders came under the expansion category. The firm increased its plant space during the year from 12,000 square feet to 74,000 square feet because of the high demand for its product, house trailers ranging up to the giant 14 by 70-footers. Three other firms opened new facilities for the production of holiday and tent trailers and campers.

The plastics and synthetics industry took giant strides with the addition during the year of five new plants producing everything from polyethelene bags and disposable cups to fiberglas insulation.

The food industry also made major gains with the opening of three new food processing plants, the construction of additions to six others and major expansions to three bottling plants. While both Pepsi Cola and Coca Cola undertook major extensions of facilities during the year, it was the third expansion in three years for the four-year-old Labatt's Brewery.

HEAVY DEMAND

The industrial demand for fabricated steel products and custom metalwork resulted in the establishment of three new metal fabricating plants and five machine shops while 12 existing fabricating plants and four other machine shops were enlarged.

In the petroleum and natural gas sector of the industrial picture five new manufacturing and remanufacturing plants were opened while three others underwent extensive enlargement.

Other plants added to the Edmonton industrial scene (with those undergoing expansions shown in brackets) were for the manufacture of batteries one, carboard boxes one, advertising signs three (one), printing and lithography four (two), printing inks one, business envelopes (one), concrete products (three), industrial gases (one), fishing tackle one, jewelry one and aerial map making one.

Completing the picture is the $75,000,000 expansion to the Gulf Oil Canada Limited refinery to increase its capacity from 16,000 barrels per day to 80,000.

It was the stated opinion of industrialists who chose Edmonton as a site for industrial development during 1969 — without exception — that their new awareness of a combination of economic factors which favor the city were responsible for their decision in selecting Edmonton for location.

Foremost among these factors was the growing popularity of the Yellowhead Route because of its superiority over the old Trans-Canada Highway as a transportation link to the Pacific Coast and the resultant shift in transportation patterns throughout Western Canada which are making Edmonton the distribution centre for the West.

LEFT CALGARY

This situation was evident in the decision of Link Hardware to construct a $750,000 distribution centre for Western Canada in the city and the launching of a $5,000,000 three-year program of warehouse construction by the D. H. Overmeyer Co. of the U.S. Canadian Freightways' $1,000,000 warehouse has also been linked to the placement of the Yellowhead Route as have the decisions by John Deere Limited and International Harvester Co. to consolidate Western operations in Edmonton.

Coupled with the northward shift in emphasis within the petroleum and natural gas industries and the resultant flow of capital investment dollars which has favored the northern half of the province by a four to one margin, the Yellowhead Route opening becomes a major factor in explaining the northward shift in population which has been taking place in Alberta.

EXPLAINS EXPANSION

This population movement, and the resulting growth of the Edmonton market area, serves to explain the major expenditure by Woodward's Stores ($2,500,000), Simpsons-Sears ($500,000) and Canada Safeway ($1,400,000) on enlarged warehouse facilities.

The northward shift in oil and natural gas production activity, in addition to providing jobs and attracting increased numbers of people, has resulted in the past year in decisions by several major petroleum industry companies to consolidate operations for Western Canada in Edmonton.

The $1,000,000 complex built by Dresser Industries in Strathcona Industrial Park might be cited as one example while the 11th hour decision by Peacock Brothers to build its plant in Edmonton rather than Calgary and the decision by Gardiner Denver Limited to erect a combined warehouse, repair shops and sales office building are other examples.

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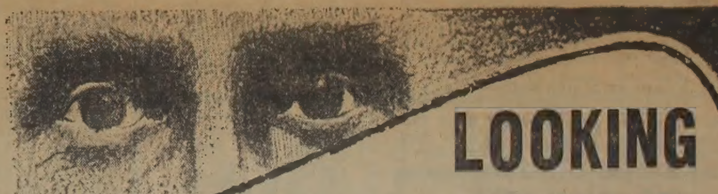

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Slight business increase expected in early 1970

Business in Alberta will probably be just a little better in the first half of 1970. No more than that.

Over the year there will be perhaps a three per cent real increase in output, with perhaps a further four per cent of inflation on top of that.

This is the estimate of the Canadian Manufacturers' Association in Alberta, as expressed by manager C. R. (Roy) Compston. In part it is conditioned by the CMA's expectation that the demands of labor will be "increasingly bad" in 1970.

ROY COMPSTON

WAGES INFLATIONARY

Mr. Compston criticized the inflationary impact of wage settlements. Labor costs constitute over 50 per cent of production costs, he said.

About 85 per cent of CMA members are small businesses, producing for a limited market, so they cannot achieve economies of scale. Labor costs are therefore vital and are uppermost in their minds when planning, he said.

Turning to output prospects, Mr. Compston said one of the most buoyant sectors is the trailer industry, especially the larger units and mobile homes. Conditions in Alberta, including tax policy, are congenial to this industry. Sales are good and are likely to go on rising as use for recreation and homemaking spreads. More and more parks will appear adjacent to cities.

The steel industry, plastic fabrication, foundry work, most chemicals, petroleum, wood and beverage industries will all continue buoyant. Pulp prices should remain firm. But in fields connected with construction, the millwork and structural steel people and, to a lesser extent, the concrete people, are talking of a fall in acitivity later in the year.

This reflects the shortage of mortgage funds and the general tightness of finance. Manufacturers are worried about credit, noting for instance that the banks are for the first time restricting advances and that secondary credit for financing is unobtainable. Profits are not so good that industry can generate all its financing internally.

There is no great talk of expansion, though a somewhat unsought benefit may accrue to local firms from the increases in freight rates. These may encourage some local extensions and new plants, to reduce costs of moving materials to and from other production centres.

Collection of accounts due should be fairly good in 1970, though the general shortage of finance encourages a tendency to use other people's money and this may mean creditors will have to do more "door knocking" than is usual. Although more chasing up may be required, bad debts are not likely to be any higher.

Kennedy round reductions have not yet had any great effect here as the U.S. is so occupied with war production.

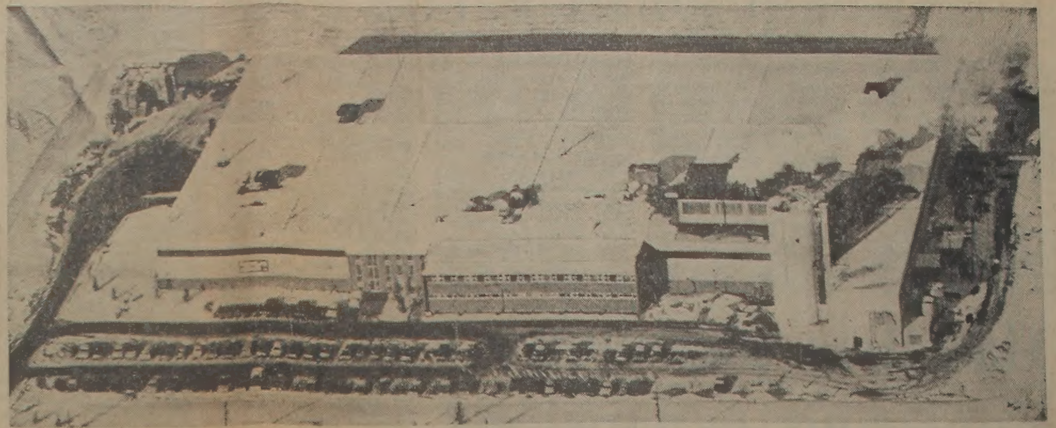
But some industries believe that the slow-down in defence production after the Vietnam war ends could cause U.S. industry to look to Canada as an outlet.

CMA think selective controls — on wages and prices — may appear on the Canadian scene in 1970, but not on a permanent basis.

They expect individuals to be affected by tax changes designed to affect more U.K.-style redistribution of wealth, to aid less well off people and regions.

The young generation of Canadians, say CMA, are accustomed to high living standards, largely based on easily obtainable credit. Expectations are high, and Canadians have still not reached U.S. levels, so the demand for credit will remain high. CMA therefore suspect that a ceiling may soon be put on credit in Canada, but that pressure for credit will go right up to the ceiling.

Better transportation through Prince Rupert is anticipated, becoming more important as the railway improves.



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Looking further ahead, business allied to oil and gas should continue to grow. Pipelines should develop and mills expand in the light of anticipated gas sales to the U.S. More activity is likely with Pacific Rim countries, including Japan, China, the U.S. and Latin America. Joint ventures between Canadian and outside interests will probably be a feature of this activity, with finance coming from outside.

The oil sands should develop and prove profitable.

Housing demand will remain high as living standards continue to rise. Edmonton will continue to expand and there will be a growth of satellite communities, involving smaller towns. This will affect manufacturers interested in concrete products, wall structures, etc.

LABOR SHORTAGE

No great improvement is expected in the shortage of technically qualified or skilled labor. There is a limited output to meet this need from technical schools and training schemes. The shortage encompasses most special trades such as tool and die makers and, in the garment industry, tailors, seamstresses and machinists. What Alberta needs is people, says Mr. Compston, and the government should be looking more aggressively at selective provincial immigration.

CMA expect more strikes in the 1970s as employers show tougher resistance to wage claims. The unemployment rate is likely to rise.

Tariff reductions are considered unlikely to greatly increase competition, since present tariffs are not really onerous.

INFLATION CONTINUES

Mr. Compston forecasts that inflation will continue to increase at a minimum of four per cent per year if voluntary restraint only is relied upon. He thinks more success in limiting inflation is to be expected from compulsory curbs, for example, on prices and incomes.

CMA think there should be more budgeting and planning ahead — say for 20 year cycles — by the federal government. Also the government should control its own lust for expansion and set guidelines for itself, so that others can plan effectively.

For long term trends, much depends on getting a refined tariff policy aimed at encouraging labor input into Canadian raw materials and protecting Canadian resources.

"Consult the governed" is a slogan commended by Mr. Compston. So he is glad to report that relations between the CMA and the provincial government are good, based on experience of working together on problems concerning taxation, labor questions, and so on.

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Balanced export mix sought in '70s

The 1970s will see Alberta shift toward more secondary industry with manufactured products becoming a greater part of Alberta's exports.

The provincial government plans to encourage this shift to obtain maximum employment and long run benefit from the province's limited natural resources.

"In the past we have leaned on exports of raw materials; agricultural products, oil, gas, or now coal to create employment," said Jack Snary, director of the provincial industrial development branch.

"The 1970s have got to be a decade when the province places more detailed emphasis on obtaining secondary manufacturing for our foreign revenue," Mr. Snary said. "More emphasis will be placed on creating employment."

"Rather than exporting our highly trained people as a commodity, we have to try to keep these people in Alberta."

Raymond Ratzlaff, provincial minister of industry and tourism, says increased secondary industry is possible because high cost education programs in Alberta have provided a great pool of highly trained people.

WORLD MARKETS

"We can look at competing on world markets with manufactured products because our numerous training institutions and universities have provided us with highly educated people," Mr. Ratzlaff said.

"We have the resources, expertise and energy supply to develop a great chemical industry. We have to go out and get this industry."

Mr. Snary sees developing a secondary industry as a feasible project.

"We have a Western Canadian market of 6,000,000 people, an Eastern market of 15,000,000 people with a bit of a freight advantage in moving material in that direction, and 220,000,000 consumers to the south."

Alberta has advantages for secondary industry. The province is the only one in Canada without a sales tax, other tax laws are lenient, and large amounts of capital are already in the province.

Mr. Snary suggests that a secondary industry could be based on processing Alberta's agricultural products. Dairy products, feed grains and other crops could more often be processed to finished products.

"Alberta will be the meat packing capital of Canada in the next five years," Mr. Snary said. "Lethbridge is having a large plant built now and even the Russians are looking at our meat."

PLASTICS INDUSTRY

Petroleum production could form an expanded base for a plastics industry supplying Canada and the United States. Mr. Snary suggests that light plastic pipe and car parts could be shipped over great distances.

"We can expect to see the production of more forest products. Plans are going ahead on pulp plants for Grande Prairie and Whitecourt.

"There is considerable interest in lumber production. Two-by-fours and such may be produced in the Slave Lake area for export. The Alaskans will need a lot of wood for the housing which must come with their northern development."

MORE REFINING

With the possibility of a pipeline from the North Slope of Alaska and the Northwest Territories to Canada and the development of the Alberta oil sands, an expanded oil refining industry could develop in the next 10 years.

"Alberta is more and more becoming a refinery capital," Mr. Snary said. "More specialized products could be produced to serve Western Canada."

With an improving tariff relationship continuing between Canada and the United States it might be possible to refine lubricating oils in Alberta and export them to the U.S.

EXPAND AVIATION

Room for expansion exists in the aviation industry. Alberta firms can sub-contract smaller work for American companys and perhaps make specific alterations on aircraft needed for the North.

Mr. Snary noted Northwest Industries Ltd. is now successfully completing a multimillion dollar project for Lockheed Aircraft Corporation.

"There is a market in the United States for specialized agricultural equipment, some of which we are now manufacturing," Mr. Ratzlaff said. "The Alberta grain problem is making these manufacturing people feel the pinch.

SALES DOWN

"Some of those in the southern part of the province have equipment sales down by 20-25 per cent. We are working with these people to develop an export market for them."

Mr. Snary said: "Tight capital is having a bearing, but hopefully by mid-decade these plants will be well under way.

"Alberta will have to become more competitive in the fight for industry if things get tougher," he added.

The search for new industry and the funds to establish the firms is one reason for Alberta's trade missions to Europe. Mr. Snary says Alberta may be exporting specialty foods and clothing to Europe before the end of the decade.

"Alberta firms may invest directly in Europe and establish manufacturing firms there," Mr. Snary said. "We could be well into this by 1980."

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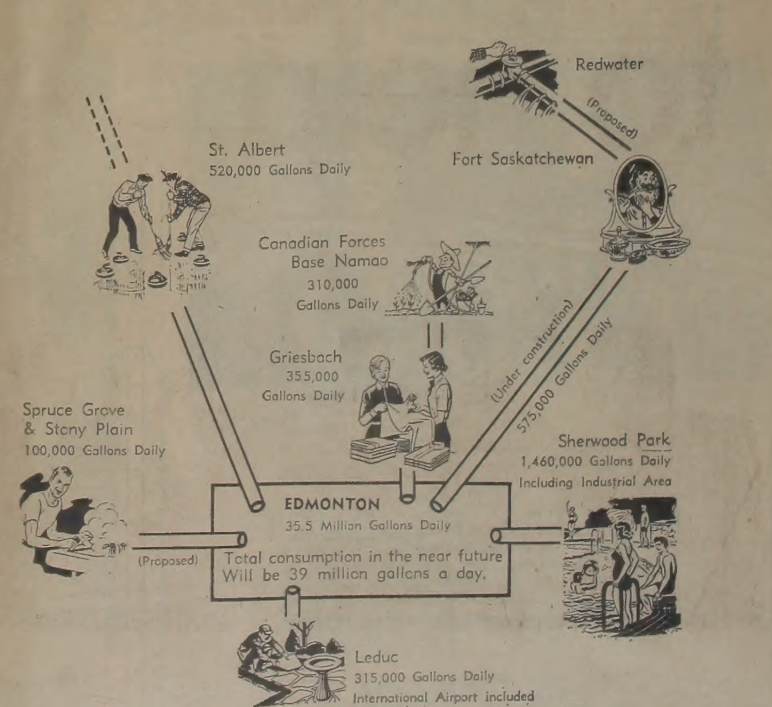

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Alberta unions expect better labor laws ahead

The Alberta Federation of Labor expect a fairly heavy program of provincial legislation affecting labor in 1970.

Federation executive secretary John McNevin says this expectation stems from the prospect of the minimum wage increase to $1.55 and the likelihood that a new Labor Relations Act will be introduced this session.

He says the minister of labor has been making pronouncements about collective bargaining in the public service field. "If the government bring in compulsory arbitration or a tribunal on B.C. lines it will be tragic," comments Mr. McNevin. "Because, though inconvenient, collective bargaining is still part of a free democratic society."

MORE RIGHTS

"What the AFL would like is for the government to look realistically at the Woods report and grant the unions more rights in the collective bargaining field than they now enjoy," he says. "If the trend in economic and wages policy is to be along the lines proposed by Trudeau, there is going to be need for bigger and better unions. If we are talking about wage policies and economic planning, then the unions must be in a position both to participate and to commit their members."

"With the large number of company unions and employee associations in Alberta, it would be difficult for the federation to make any meaningful commitment on these policies," adds Mr. McNevin.

RESTRICTIVE MOVES

The AFL believe the government should be moving more towards allowing the trade union movement to grow and consolidate.

But they feel that the minister of labor is in fact looking towards "more restrictions on labor," especially regarding public service employees. "His statements in recent months indicate he is still under the delusion that legislation can force industrial peace," Mr. McNevin asserts.

He adds that the federation fear the present attempts by the federal government to reduce inflation could force us into a recession. The AFL allege it is erroneous to blame labor for inflation and they suspect any efforts to find a cure will be at a cost to labor and will prove unsuccessful. They reiterate their belief that inflation has been greatest in areas (e.g., interest rates, land costs, insurance, doctors' bills and government taxation) where there is little unionization. And they repeat their claim that their members must have more in order to "catch up."

LESSEN DEMANDS

Mr. McNevin says that if the government will control these inflationary influences and control prices, then the demands of labor will proportionately lessen. But, he says, the unions would not accept a bargain whereby wages could be controlled if prices were also controlled.

Some places can stand wage increases and some not, he argues. It is best to leave employers and unions to bargain freely. In addition to the fact that in each case the amount that the industry can stand will be a limiting factor, public opinion will also restrain wage increases, according to this view. Anyway, there is no proper machinery for determining fair wages, so free negotiation is best.

But Mr. McNevin admits that this is likely to lead to tough battles over wages, as employers harden resistance to claims.

MORE DISPUTES

He says the unions expect 1970 to bring more disputes and a return to a more rugged pattern of industrial relations. The only way he can envisage any departure from this "balance of power" stance is if some machinery could be devised, bringing in suitable mediators with the right background and having the assistance of necessary technicians, so that disputes could be brought to a reasonable settlement. But Mr. McNevin sounds as if he does not really see such a development as an early prospect and cautions: "Unions still have to justify themselves to their members, as well as to the company and the public."

JOHN McNEVIN

Turning to longer term trends, Mr. McNevin says there is a strong feeling among Canadian Labor Congress unions that smaller, inefficient unions will have to merge with larger, more efficient ones.

MERGERS LIKELY

He expects that the coming decade will witness more and more mergers like recent ones where, for example, meat cutters and packing house workers came together and four railway unions joined to form the United Transport Union.

The 1970s will also probably be characterized by more and more co-operation between unions in the same field in different countries when dealing with large international companies. "It is being recognized by unions in Europe, North America and elsewhere that cartels and international corporations can only effectively be dealt with by big international union organizations," comments Mr. McNevin.

Also on union organization, Mr. McNevin points out that, contrary to what many people think, the unions are comparatively poor financially.

NEED FUNDS

They need more cash to enable them to develop adequate educational, research and other services appropriate to the size and importance of their role in society. Union leaders wryly admit that union subscriptions have not in general kept pace with rises in wage rates.

To cope with this, says Mr. McNevin, some large unions are now relating subscription structure to wage rates. He wants to see union members facing up to the need for higher contributions, so that stronger and more efficient unions can be built up.

The 1970s, continues Mr. McNevin, will see carried further the growing tendency towards centralized negotiations in certain industries. He cites as an example public service, where he predicts province-wide or regional negotiation is definitely coming.

CANADIAN IDENTITY

This centralized negotiating is already in evidence, he adds, in steel piping mills and, to some extent, in oil.

Mr. McNevin believes that the 1970s will see also a strengthening of the essential Canadian identity of unions and he stresses that this Canadian identity is already securely established. "Contrary to the cry of Left extremists," he proclaims, "Canadian unions have never been American-dominated, though some of those Left extremists are themselves foreign-dominated!"

Forecasting greater union involvement in social issues such as education, minority rights, urban renewal, poverty, etc., Mr. McNevin says it is surprising how much poverty and near-poverty there still is in Alberta, despite its riches.

ONE COMFORT

He says one comfort in looking ahead to a rather troubled decade is that the unions are able to talk with the provincial government. Mr. McNevin pays tribute to the way Premier Strom has publicly drawn attention to the poverty and other problems that still exist and he says the premier seems to be as concerned about these problems as the unions are. "In a Convocation address to Calgary University last spring he spelled out the problem of poverty in terms no other premier in Canada has had the guts to use," asserts Mr. McNevin.

"So if there is any ray of hope it may be that the government might do something dramatic about these social problems. If so we can really do something to tackle poverty, urban renewal, farming and similar problems."

Gas firm planning numerous expansions

Northwestern Utilities Limited will spend about $6.5 million during 1970 on improvements and expansion of its natural gas distribution system.

One of the major projects will be completion of the firm's 66-mile, eight-inch line from the Simonette gas field to Grande Cache. The 1970 portion of this $2.5 million project will be $1.1 million.

The gas will be used by McInytre Porcupine Mines Ltd. to dry coking coal prior to shipping it to Japan. Gas deliveries are scheduled to begin May 1.

Extensions to the existing distribution system, the addition of services, such as connection of meters and regulators for new customers, will cost about $1.1 million, while improvements to the distribution system will total about $500,000.

COST $1.1 MILLION

Extension of services to new customers in rural areas will run another $1.1 million, as will installation of new production and transmission systems. Replacement of old equipment, such as trucks, and the addition of other heavy equipment used by the firm for routine maintenance will run about $500,000 for 1970.

Part of a continuing project is the gradual phasing out of the company's original 12-inch gas line from the Viking field to Edmonton. The line was built in 1923. Northwestern plans to spend $1 million on replacement with 16-inch line during the current year.

The company is keeping a sharp eye out for potential new customers within its existing system as a means of holding costs down.

"The company will continue to make gas service available to all new customers," said the firm's general manager Dave Collier. "We may delay certain projects which are desirable but not essential," he added.

114 CENTRES

During 1969, Northwestern added four new communities to their service network, bringing the total to 114. They have a total of 135,300 customers.

Of these, the largest signed during 1969 was the Imperial Oil Limited fertilizer plant at Redwater. This $50 million complex will eventually be taking up to 35, million cubic feet of natural gas a day — second only to the City of Edmonton power plant, which had a maximum load of 66 million cubic feet last January.

During the current year, the firm estimates it will sign up 4,800 new customers — 600 of them in rural areas.

Over the next decade, they don't see any radical changes — just continued growth with Alberta.

Railroads face coal challenge

A major challenge to Canadian railroads during the 1970s is the movement of millions of tons of coal annually to the West Coast.

CP Rail has the tough assignment — hauling over 5,000,000 tons of coal from the Kaiser Resources Ltd.'s mine in the Crowsnest Pass to the Roberts Bank superport.

Six trains will be required to move the coal from mine to port. The round trip over the 700-mile route will take 72 hours.

Facilities will automatically load and unload cars without uncoupling. Trains with full loads of 9,000 tons of coal will require 11 13,000 horse power diesels to climb the steep grade of the Selkirk Mountains.

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Slave locomotovies controlled from the headend by radio signals will be located about midway along the train to equalise braking and pulling power on a total of 88 cars.

"CP Rail's first unit train in Western Canada began operating in the autum of 1969, hauling sulphur from Pincher Creek to Vancouver," R. A. Ferguson, CP's Alberta area public relations representative said. "Operating on a twice-a-week shuttle schedule, the sulphur service will haul half a million tons annually for export."

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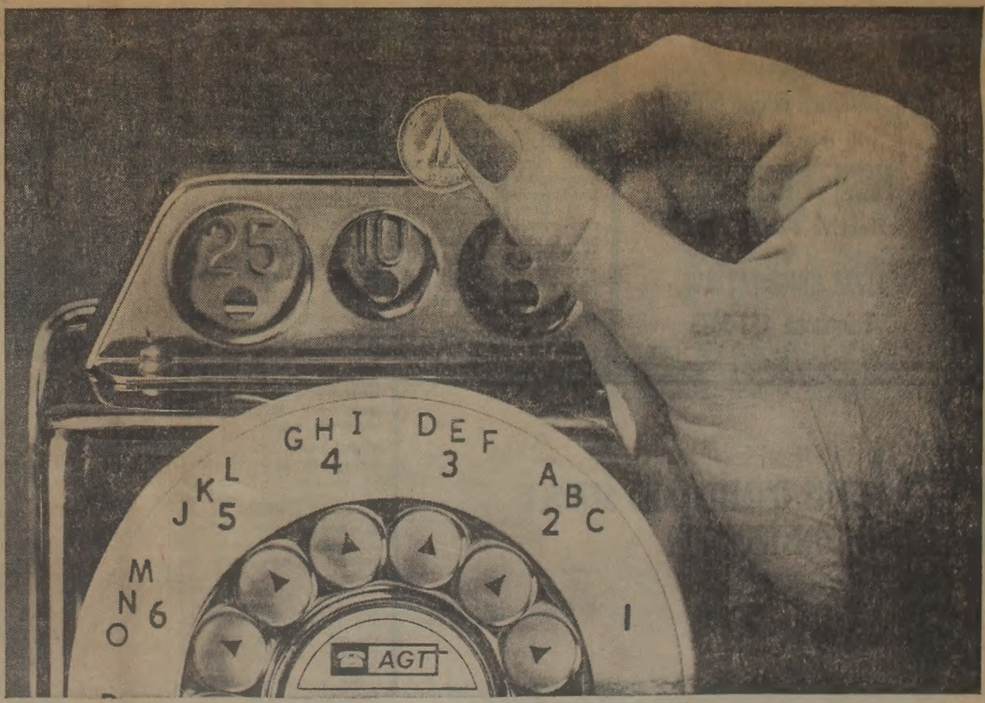

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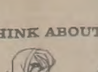

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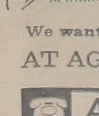
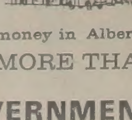


Last year we paid more than that to 6,360 pretty important people. Our employees. They in turn spent a lion's share of that money right here in Alberta.

THINK ABOUT WHAT MONEY BUYS.



Last year our 890 vehicles used over a million gallons of gas. We ordered everything from pens, pencils and paper to giant-sized buildings right here in Alberta. We even paid over two million dollars in property taxes.

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. . . 1970 may be slow, but future looks good

Bright prospects encourage slow construction industry

Expectations are that 1970 will see little or no increase in the volume of construction, but that the coming decade over-all holds bright prospects.

Reserve about the immediate future arises largely from anticipation that government policies to cope with inflation will keep finance somewhat tight. T. E. Bate, president of the Edmonton Construction Association, thinks it even possible that while the dollar value of construction keeps up in the year ahead, the physical amount of construction could actually be a little less than in 1969.

But feelings are that Alberta's long term prospects are of continued growth and that the construction industry will, in step, continue at a high level of activity.

WILL HELP

Nearer at hand, the decision to build a new university at St. Albert is welcomed, but the first year will be more occupied with design and planning. So the construction industry will not feel the boost in activity so much then as in the second and third years of the projected three-year program.

To risk mixed metaphores, a black cloud has appeared in the sky in the form of a white paper on taxation. It is feared that the government may scoop up too big a share of hard earned profits if the proposals are put into law. The many small and family companies in the construction industry think they, in particular, will suffer if Finance Minister Benson's policy goes unreformed into effect.

An Ottawa white paper that, by contrast, meets with some enthusiasm from the industry is the one on the metric system. The construction industry has apparently been urging the change to metric for some time. Mr. Bate thinks the revolution may be effected in the 1970s.

BULK LARGE

Systems building and off-site prefabrication are confidently expected to bulk ever larger in the construction story as the decade unfolds. The sort of thing likely to be seen more often is the erection of multistorey buildings with rooms built elsewhere, put on top of one another on the site, and then covered with a shell holding the whole edifice together.

In responding to the demands of large and complex projects, the many separate specialists and sub-contractors are likely to collaborate and integrate increasingly. The forming of consortia to carry out major projects is likely to become a more common occurrence.

There could be an increasing tendency for customers to offer projects on a "design and construct" basis.

PACKAGE DEAL

Design and construct projects, as favored, for example, by the U of A for its general administration building, involve the customer telling the construction companies what sort of facility is needed and how much money is available. The constructors then work out and put forward complete design and construction proposals. This may involve the setting up of a consortium to handle the whole project.

Though this kind of project is thought likely to be encountered more often, there are apparently still two minds in the industry as to whether "design and construct" will prove a better system than more traditional approaches. This discussion should be resolved in the period ahead.

GREAT PUSH

The industry has been subjected to a great push by the federal government to go over to the modular system of building, in order to reduce construction costs. Because of this there is likely to be an increasing use of modular construction.

Computers are already widely used, even by quite small firms, for example, in critical path analysis and other calculations. It is anticipated that computers will be used more and more, as further and improved applications are evolved and as people in the industry learn more about how computers can help them.

Partly related to the spread of systems building, but also a general phenomenon, is the increase in the use of prestressed concrete as a building material.

FAST GROWTH

It involves introducing high tensile steel tendons into high strength concrete. This reduces the amount of concrete required, as compared with conventional concrete construction. It is particularly applicable to building long columns, beams, slabs and girders. The manufacturers say there was no such industry in North America in 1950, but by 1955 sales volume in the continent was $25,000,000. The 1964 total reached $300,000,000 and the manufacturers confidently assert it will exceed $700,000,000 this year.

Real estate brokers see fewer sales with an even trend to stable prices

Real estate brokerage activities will probably fare about the same in 1970 as last year, though there could be a slight over-all fall in sales.

People in the business are not expecting any increase. Indeed it is thought safe to say that any movement that does take place will be small.

The over-all activity in real estate covers the industrial, commercial and investment sectors as well as the residential.

In 1969 there was less activity on the industrial, commercial and investment sides and the picture there will probably not change much in the coming year.

SALES UP

In the residential sector the volume of sales was up last year over 1968, but prices of single family dwellings in Edmonton tended to level off sometime around September and since then have even tended to drop slightly.

However, Canadian Association of Real Estate Boards figures indicate that for Alberta as a whole, prices continued to rise, if more gradually, to the year end.

There is a good chance that the Edmonton trend may continue at least for six months or so, the slight fall resulting from highter interest rates. These affect even older houses, because they often have to be refinanced. And the high interest rates have caused buyer resistance.

High interest rates have affected the industrial, commercial and investment sectors too. For instance, people who purchase real estate as an investment have had to slow their activities down.

There is some feeling that, though no reduction in interest rates is likely in 1970, they may have hit their peak and may tend to stabilize at the present level. Reductions remain unlikely as long as governments continue their anti-inflation drives.

Another factor that has had a dampening effect, especially on investment, is the Benson White Paper on taxation. Unsure what is going to happen about its proposals, people tend to wait and see.

Looking ahead over the decade, there is some feeling that 1971 may see some reduction in mortgage rates. And, barring any serious economic disaster, there is confidence that the real estate business will make considerable progress during the next 10 years.

Already there can be detected a trend towards a slight reduction in the number of single family dwellings, with a shift to apartment block living. It is quite possible that condominiums will become a much bigger factor in the accommodation market — taking into account that condominiums can vary greatly in design and scope.

BIG SAVINGS

They can range from high rise style (except that the apartments are sold instead of let) to garden terrace style, perhaps with different levels. In Alberta, especially in Edmonton, they are a recent innovation and it is suggested that they make possible considerable economies in costs. So over the decade many people who would ordinarily buy houses may look at condominium dwellings to reduce expense.

In the industrial, commercial and investment sectors of real estate there is unlikely to be much change in the level of sales in 1970 as against last year. But, over the decade ahead, there is good prospect of a great deal of new development. The rate of development will in fact depend on the availability of money and the rates of interest. Last year money was hard to get and rates were high and the coming year will be much the same.

In these sectors also there is some indecision arising from fears of what the Benson White Paper will bring.

NEW APPROACHES

Those in real estate expect all types of building to see increasing introduction of new materials and methods, aimed at reducing costs and improving quality and efficiency. Much research and study has been done in these directions and the feeling is that this is bound to bring about much change as time goes on.

It is recognized that a problem in the coming years will be the provision of low-cost accommodation for people whose incomes are small. Accepting that there are certain low-income groups who will not get satisfactory housing without some kind of subsidy, there is support for the view that private enterprise could best build the accommodation. Governments and other public bodies could best help by then giving financial assistance with housing expenses to individuals in need. In this way the expertise of private business could contribute to making public assistance more efficient and economic.

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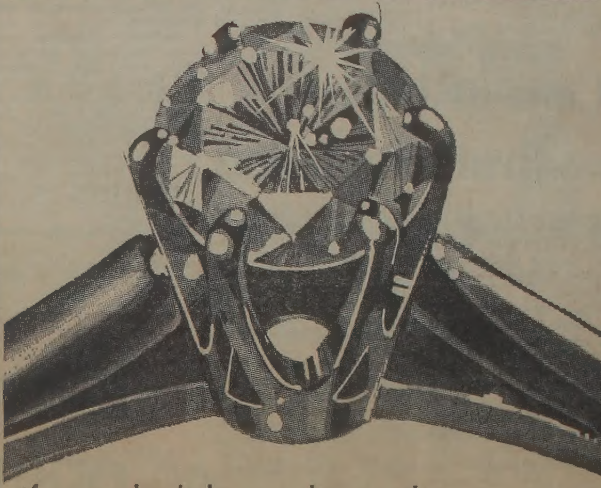
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Success of jumbo jet boon to local firm

The development of the jumbo jet will mean steady employment for several hundred Edmontonians for much of the 1970s.

Edmonton is a long way from Lockheed Aircraft Corporation's Palmdale plant in the California desert, but Northwest Industries Limited appearrs to have a pretty solid market in that operation.

Northwest's $30,000,000 contract with Lockheed is one of one of the major reasons for the company's certainty that it will employ over 1,000 people by 1972. Right now the staff is just over 600.

MAJOR CONTRACT

Other encouraging reasons are the pending continuation of contract with a major British aircraft firm, the development of production line that can turn out a variety of plastic industrial products, and a pretty solid reputation as an overhaul facility for Northern airlines.

Just to make the picture a little more complete, the firm's wholly owned subsidiary, Northwest Industries Commercial Ltd., is rapidly developing a strong position in the light aircraft market.

The commercial branch has the franchise for the Cessna Aircraft Company. Sales staff say they are selling one plane a week, although the aircraft market is slow.

HEALTHY MARKET

Commercial sales manager Dick Schram's optomism for healthy future aircraft market is supported by the needs of the developing North and the production of Cessna's first executive jet aircraft which is to come on the market in mid 1971.

Although the past year wasn't kind to Northwest Industries' main plant, the company starts the new decade on a solid base.

A few lumps which were hard to swallow included a 59-day strike, a higher than expected wage settlement, and the failure of Handley Page Co. Ltd. of Britain which had a major contract with Northwest.

The return of an eager workforce allowed Northwest to achieve the first phase of its contract with Lockheed. With a day to spare, the aircraft components which included about 40 per cent of the floor, mid and forward section pressure bulkheads, and nose wheel doors for the L-1011 TriStar jet.

The L-1011 is Lockheed's model of the jumbo jet. It is capable of carrying about 350 passengers if fully loaded. It will also be the most common jumbo in Canadian skies. Air Canada has ordered 10 of the $17,000,000 aircraft, compared to three Boeing 747s.

BEAT SCHEDULE

The firm turned out two more assemblies in 1969, both well ahead of schedule. In 1970 this will increase to 15, to 45 in 1971, to 80 in 1972 and on until the contract for 350 is finished.

Northwest Industries feel they have a good chance to make even more. Lockheed will likely sell more than 350 aircraft, and the stretched version of the L-1011 is already on the drawing board.

Distance is not a factor. Lockheed is subcontracting to firms in Winnipeg, Georgia, Tennasee, Ireland, and purchase Rolls-Royce motors from England.

Moreover, Northwest has just completed the installation of $1,400,000 worth of new machinery and plans on some new equipment in 1970. One half-million-dollar machine for cutting and shaping parts is controlled by a downtown computer to ensure accuracy.

The plant still has idle equipment following the failure of Handley Page, but this firm has been reorganized and Northwest expects a new contract. Originally the Edmonton company was to construct 102 tail assemblies for the British firm.

As Canadian distributer for Handley Page's Jetstream turbo prop, Northwest Industries is also busy. It is currently starting on a contract to finish some 30 of these 18-passenger British built aircraft for a New York commuter system known as Airspur.

Edmonton workmen completely cover the interior, install radio equipment and other navigational aids, and even make seats for all Jetstreams which are now coming to the North American market.

Northwest Industries began as an overhaul base for military aircraft. It is highly specialized in the repair of C-130 Hercules which are used in Alaska and operated by Pacific Western Airlines in the Canadian North.

Northwest Industries hopes to be the Hercules centre for this half of North America. The company also does considerable work on American and Canadian armed forces aircraft.

In 1969 the company had a good year in the manufacture of re-inforced plastic pipes and containers for industrial use.

During the 1970s, Northwest expects to increase its marketings of these products which can store and transport corrosive chemicals. Plans for pulp mill development and the eagerness to control pollution by many citizens insure this market.

The company's research department has recently developed a low-cost variety of pipe which appears to have a good market in irrigation and municipal sewer and water projects.

LOAD OF REINFORCED PLASTIC PIPE LEAVES BY RAIL
. . . one of Northwest Industries many divisions

Cement industry on firm foundation

For those in the cement industry 1970 is a difficult year about which to make predictions, because conditions are unsettled and vary in different sectors.

Without being too optimistic, opinion is that over-all it will not be too different from 1969. Following a good year in 1968, last year also proved satisfactory in general, though some parts of the industry did better than others.

Policies to restrain inflation tended to reduce money available for institutional building (such as public buildings) and engineering construction (airport and highway redevelopments, power plants, etc.).

On the other hand there has been continued strong activity in the housing development sector and a steady rate in work on essential developments like schools. And there has been considerable activity in connection with the development of natural resources, for example, the reactivation of the Albertan coal industry.

Similar experience is likely this year. This is generally quite satisfactory, but it is noted there was some downward trend in activity towards the end of 1969 and this may go on for a while. However, there is some hope that things will pick up in the later part of the year.

Alberta's strength in natural resources and exportable materials is seen as a favorable influence for further activity.

OUTLOOK PROMISING

In the longer term, looking to the whole decade just starting, the outlook for cement is very promising.

The 1970's will see continued expansion of roadbuilding using soil-cement base. This is a development of the last 10 years that is coming into wide use in the city and the province.

Oil discoveries will lead to growth and, perhaps even more important, will generate funds on which further growth is built. The cement industry will feel the benefit from the demands upon it which such growth will make.

Mining developments involve the use of cement and concrete so, for instance, the activity in coal should help the industry. More than that, mining tends to promote population growth in the areas concerned and it tends to lead to increased urbanization. These developments in turn involve more building.

Northern development, in which Alberta has such a direct concern, greatly interests the cement industry also. Directly and indirectly, the hoped-for progress in this field can contribute to the expansion of the industry.

All in all, Alberta seems to promise continued strong activity and development opportunities for cement producers in the 1970's and the years beyond. And those in the industry feel sure they will be able to satisfy the growing demands upon it that the times will bring.

Oiler gets 'em on fly

Revenue comes from moving freight cars and the railways of the 1970s will try to maximize this movement.

Canadian National Railways has developed a method of oiling the journals of freight cars without stopping them.

The device was designed at the Montreal technical research centre. Trackside equipment to carry the oiler was worked into the system.

As the freight trains move into the yard, car inspectors examine the wheel boxes on the cars. They leave the oil box lid open.

As the cars move over the top of the hump, the open box is detected by a sensing device that switches on the automatic oiler.

There is a timing device to limit the amount of oil delivered by the nozzle, and when the oiling is complete, and the oiler on its platform reaches the end of its short trip, austomatic devices put everything into reserve, and the platform moves back into position, ready for the next wheel box requiring lubrication.

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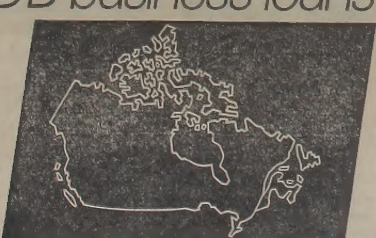
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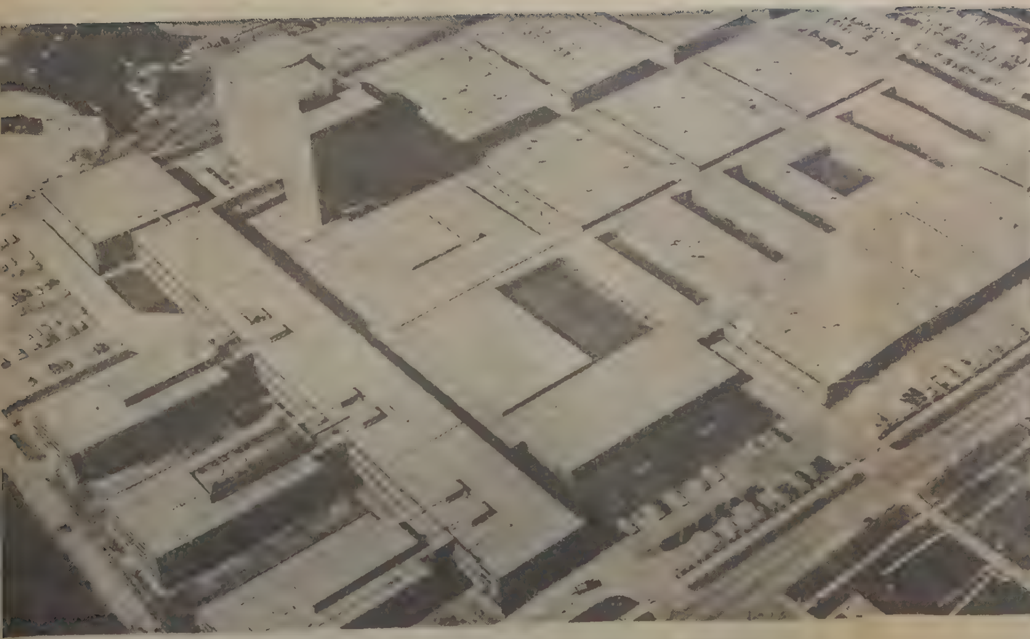

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Financing rising education costs termed major problem in new decade

The major problem in 1970 and the decade will be that of financing education at the elementary and secondary levels.

This is the forecast of Dr. H. T. Coutts, dean of the faculty of education in the University of Alberta.

Swelling expenditure and the general pressure for economy and for anti-inflationary restraint provide the background factors. Dean Coutts thinks governments and the public are going to ask for sharper accounting from all responsible for devising and executing educational programs.

Individuals, boards and others responsible for education will want to do a lot of reassessing as to how projects and programs in the elementary and secondary categories are to be paid for.

This financial issue will presumably also have some bearing an another subject which Dean Coutts expects to bulk large in education in 1970. The subject is the working out of the plan for post-secondary education. In this context, much attention has been attracted by the provincial government's recent white paper.

MAKE CONCESSIONS

The immediate problem, says the dean, is to work this out. For instance, questions to be resolved affect inter-relations between universities, community colleges, etc., communications between them and between them and other bodies, and financial arrangements. The particular responsibilities and roles of institutions have to be defined and their limits delineated.

During 1970 the problem of early (i.e., pre-primary) education will continue to be discussed and Dean Coutts thinks it likely that some small concessions will be made to beginning formal education in the public system at an earlier age than at present permitted.

He sees as "the handwriting on the wall" a recent relaxation which permitted earlier admission of students.

Dean Coutts also believes the coming year will see considerable attention being given to the problem of educational provision for special groups, for example, physically and mentally handicapped children and adults.

Over the next ten years and beyond, the dean considers a theme that will command attention is the whole task of providing manpower as a result of education. Imbalances of manpower distribution now showing up will become more apparent in the future. And the need will be for a tremendous expansion, for example, of retraining programs to prepare people to change from one job to another.

Where people at present make five or six changes of job in a lifetime, the number of changes, including complete changes of career, will greatly increase in the future. This tend will be the result of changing industrial processes, involving new methods, new materials and new inventions and discoveries of all kinds.

Also, the long term trend will be toward a tremendous increase in leisure for a great part of the population.

LEISURE EDUCATION

So it will be a pity if there is not a forward-looking program of education to cope with the increase in leisure. If society doesn't provide for it in a wholesome way, someone will cater for it in ways that may be less desireable. But he is hopeful that programs will be developed.

To cope with problems of pollution and depletion of natural resources, education will increasingly be concerned with finding means of checking incursions and of applying these checks effectively. There will be the growing challenge to discover and develop synthetic materials and substitutes, to protect rare or valuable substances and to replace materials that are used up.

USE COMPUTERS

Education will make greater use of technology, for instance, by employing computers on an increasing scale for a lot of teaching of routine and objective matters. Computers can't, says dean Coutts, replace teachers in respect of values in teaching subjects like literature. But computers can, for example, bring the resources of the written word to many more people

He thinks there could be a tremendous saving if, for instance, the province — or the country — could have a centralized library employing computers for storing and making available material. "All the new universities don't need to duplicate all the written word resources," the dean suggests. With the sophisticated storage and retrieval facilities now available, centralized computers could do the job

BUSINESS EMPHASIS

In general there will be more emphasis on the business and vocational aspects of education and he hopes the academic aspects will naturally grow as the foundation for these.

The dean is mildly hopeful that teaching will in future tend to involve less talking or lecturing. Instead there will be more participation and more use of varied aids and methods. The universities themselves are examining the ways teaching can be done and the U of A has a committee studying teaching from this angle. Teaching will in future be reinforced all along the line by the technolgies, as means to better communication. But the technologies should not be apparent — they should be means, not ends.

Experiments now in process will help sort out the weaknesses and strengths of team approaches to teaching and learning. The greater combination of human resources afforded by these approaches is likely to be favored increasingly.

Perhaps economies will be possible in certain directions. For instance, it may be that schools are not being used enough hours per day. More intensive use of buildings might, say, be related to the increase expected in adult education.

Containers, solids pipelines are keys to land transport

Containers and similar concepts will improve land transportation for Alberta during the 1970s.

"The big development thus far with containers has been between Europe and Eastern Canada," says D. F. Purves, vice-president of the CN mountain region.

"Containers landed at Montreal often come by rail to destinations across Canada," Mr. Purves said. "There are containers in our Edmonton yard right now from Manchester, England."

Mr. Purves expects to see more containers coming into Vancouver from the Orient. Vancouver's first container port on Centennial Pier is to be finished this summer.

AID ALBERTA

Mr. Purves anticipates that container handling facilities will also be installed at Roberts Bank. Many container shipments from the Orient will carry goods to Alberta.

Containers coming to Alberta have one drawback—There is not much opportunity for a backhaul.

"Finding employment for empty containers is a problem," Mr. Purves said. "Generally it is cheaper to ship most Alberta produce in bulk cars or in pallets and return the containers empty.

"We may see more equilibrium in the use of containers when they come into more general use."

Mr. Purves sees pipelines carrying more freight in the coming decade. Construction of oil and gas pipelines from the Arctic is one possibility, but within the next 10 years solids pipelines might be in use.

"Its possible that the solids pipeline will become part of an inter-modular system which might also incorporate trucks and rail," Mr. Purves said.

More tangible changes are towards bigger rail cars. Industry wants the 100-ton railcar which brings with it heavier tracks and larger trucks to feed the rail terminals.

"Trucking firms or heavy industries may try to resolve the problem of the heavy trucks by building private roads which can stand their loads," Mr. Purves added.

Railcars with larger dimensions, wider doors or double doors are more in demand to take the larger loads.

"This expansion is requiring a lot of new equipment on the mountain track and more sophisticated equipment to test and maintain the track."

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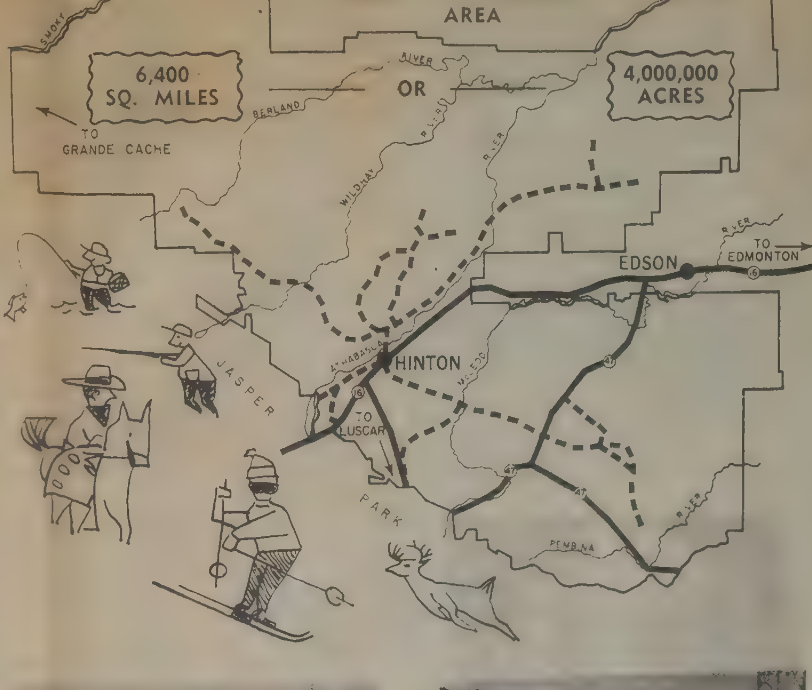

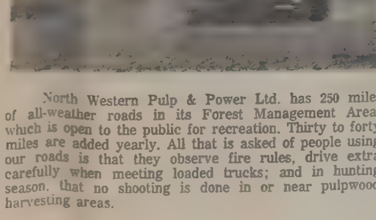

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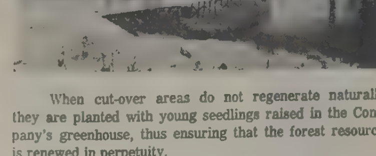

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Tourism top money maker for province in 1980s?

Tourism — Alberta's third largest industry — could be this province's chief money maker by 1980.

"We now consider tourism to be the third largest industry in the province," said Ray Ratzlaff, provincial minister of industry and tourism.

"It is a rapidly expanding industry and Alberta is in an excellent position to take part in the expansion," Mr. Ratzlaff said. "We have largely an unspoiled landscape which is becoming more and more important.

"The pressure of people on natural recreational areas has been very damaging in Eastern Canada, the United States and Europe," he said. Recent developments in transportation have put Alberta in an ideal spot to serve their needs.

"Tourism in Alberta increased by seven per cent in 1969," said E. S. Bryant, director of tourism for the province of Alberta.

"Our estimated revenue from tourism was $222,000,000 of which some 60 per cent was generated by Albertans," Mr. Bryant said. "Even so some $85,000,000 was added to the Alberta economy by travellers from outside of the province."

Mr. Bryant said tourism is the largest single factor in world trade. An estimated $14,000,000,000 annually is generated in all countries by tourism.

RANKED NO. 2

Canada's tourist income in foreign currency was $992,000 in 1968. This placed it just ahead of newsprint (which earned $990,000) as the No. 2 Canadian export. Canada's exports of automobiles and chassis totalled $1,357,000,000 in 1968.

The nation's tourist revenue is expected to be well above $1,000,000,000 in the year just completed. The Canadian Tourist Association estimates this foreign spending will double to $2,000,000,000 by 1977.

Nationally the tourist industry, which sees Canadians spending $2 in Canada to every one spent by foreign visitors, right now represents in excess of $3,000,000,000 annually.

BOOM IN '70s

"Everything points to a boom during the 1970s particularly in the Alberta tourist industry," says Mr. Bryant.

Growth can stem from three areas. Two of these, the domestic market and the 220,000,000 people in the United States, are continually becoming more affluent.

"Shorter work weeks, longer paid vacations, more disposable income, earlier retirements, and longer life expectancy are trends that should create increasing demands for recreation and tourism facilities and stimulate leisure spending," says a report prepared by Acres Research and Planning Ltd. of Toronto for the Canadian Tourist Association.

FIGURE GROWING

Increasing wealth in Europe and the possibility of lower passenger rates cannot be overlooked. As yet, spending from countries other than the United States is extremely small, but this figure is growing.

"The number of European travellers to Canada has increased by 30 per cent in the past year," said George W. Powell, European general manager for the Canadian Government Travel Bureau in London.

"Europe contributes 70 per cent of Canada's overseas visitors. With the exception of Russia, all European countries had more citizens visit Canada."

MORE U.K. VISITORS

Mr. Powell said that in spite of the strict limitation on money which could be taken from the United Kingdom, the British are travelling. Between January and August 1969, 108,000 came to Canada. In the comparable nine months of 1968 some 80,000 Britons visited Canada.

With the recent removal of the potential spending limitation, the United Kingdom has to become the greatest potential market. Mr. Powell added that Germany, France, Holland, Belgium, Italy and even Austria are developing as good markets.

Members of German hunting lodges and Swedish industrialists are particularly interested in visiting Canada's North, Mr. Powell said.

More interest should be paid to developing the European market as a hedge to possible moves in the United States to restrict spending outside the U.S., Mr. Powell suggested.

Moreover, the 250,000,000 Europeans form a great market. Canadian inflation and a lack of interest here in promoting in Europe has slowed development.

The greatest handicap for most Europeans is the high cost of a Canadian holiday which is beyond the reach of their relatively lower incomes.

"We have got to get more investment in tourist facilities," says Mr. Ratzlaff. "The federal government, local government, and private industry must all come together if we hope to get full benefit from the possibilities of the 1970s.

"Certain problems must be examined and handled through co-operation between government departments and private industry.

"One particular problem is that of the wilderness areas. There is certain competition for the use of these areas," he said. "Perhaps specific areas should be established for total wilderness."

Mr. Ratzlaff said wide spread interest in Europe could no doubt be developed for such things as barge tours around the lakes, canoeing, and hunting.

Trade during decade will turn to exports

Alberta can look forward to selling raw materials on new world markets, while manufactured products will take a larger share of total export markets.

This is how Ray Ratzlaff, provincial minister of industry and tourism sees the new decade.

Increased production of manufactured products will come hand in hand with the development of new markets. The Pacific Rim countries, with their rapidly developing economies, will require both types of export while the European markets are expected to open more and more for Alberta's raw materials.

MAJOR ROLE

Raw materials will play a major role. Dominion Bureau of Statistics figures show Alberta's mineral production at $1,193,000,000 in 1969 which is second only to Ontario's $1,214,000,000 mineral production.

This figure can only go up as Alberta's coal starts to leave the province, as increased natural gas contracts are put into operation, and as expanding American demand for oil forces the development of the Alberta oil sands.

"I am optimistic about the coming year," says Mr. Ratzlaff. "For the next decade I believe the Pacific Rim Countries have the greatest potential as far as trade is concerned."

JAPAN MAIN TARGET

Mr. Ratzlaff points to the obvious choice of Japan as an increasing market for natural resources, but notes the importance of all the other developing nations in that part of the world.

"Latin America is a giant. True, we don't know what is there, but there is a real potential throughout that whole continent with a great lot to be done."

Mainland China is a question mark, which Mr. Ratzlaff says: "We can't predict, but we know the federal government is seeking to develop diplomatic recognition.

"If it was to be recognized in the next 10 years, then a bottomless potential would develop for agricultural, natural resources, lumber, and perhaps manufactured products."

In the coming year the Alberta government plans to develop its role in Europe. Mr. Ratzlaff says he expects the province will place an Alberta agent in Europe as quickly as possible. Similar plans are being made for Japan.

"I do not foresee an Alberta House as such in Europe, perhaps the one in London was useful, but we are considering a change in our European operation," Mr. Ratzlaff said. "We will have to have people there free to move around."

Mr. Ratzlaff added: "It is premature to say what will happen in 1970, but I can't help strongly recommending European promotion as soon as possible."

MAJOR MARKET

"The United States will continue to be our major market. If present trends continue petroleum sales will remain extremely important," Mr. Ratzlaff said. "Northern oil will not infringe on our traditional markets, because the American consumption of oil is increasing and mainland oil reserves are dropping."

New markets for present exports and new export markets are both being predicted.

"Europeans showed a surprising interest in our coal during a recent trade mission," Mr. Ratzlaff said. "The German steel industry had to reduce production by 11 per cent after running into a coal shortage. Currently they are importing coal from India.

GREAT POTENTIAL

"There are great possibilities of selling more products from a sophisticated electrical and chemical industry," he said.

Alberta is already deeply involved in shipping manufactured products. In the first 11 months of 1969, $1,757,000,000 worth of manufactured products were loaded to points within and outside Alberta. This was up from $1,649,000,000 for the comparable period in 1968.

Another indicator is Edmonton airport which serves as a loading point for many locally manufactured materials. Total freight shipped in 1968 was 15,000 tons. Scheduled freight had increased by about 30 per cent over 1966. The International Airport also loaded 2,647,000 pounds of freight in 1968.

TRADE MISSIONS

In an effort to encourage more export trade, business and promotion delegations have been sent to the United States and Europe during the past two years.

Jack Snary, provincial director of industrial development, notes two trade missions to the United States in the past two years.

The first visited the oil cities of Texas, and Oklahoma while last fall's stopped at San Francisco and Seattle.

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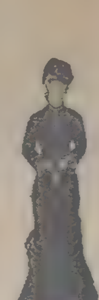

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Keen competition predicted for '70s convention money

Edmontonians could own a convention business which would bring the city $16,000,000 annually by the early 1980s.

Failure to provide improved facilities could as easily slash the current revenue to below $3,000,000 annually.

Figures compiled by the Edmonton Convention Bureau show that delegates to Edmonton conventions have almost doubled in the past three years.

From an industry with 96 conventions and 27,000 delegates in 1966, improved facilities, organization and promotion brought 52,128 delegates to Edmonton to attend 208 conventions in 1969.

BIG SPENDERS

The bureau estimates that convention delegates stay in the city for three days on the average and spend $35 daily. From this base the industry contributed $2,835,000 in 1966 and $5,500,000 in 1969.

The bureau expects $6,400,000 to flow from 232 conventions planned for Edmonton in 1970. Long run projections indicate that the city could host 539 conventions in 1982 at which 157,000 delegates would spend $16,000,000.

"This rate of increase can only be maintained if we get a trade and convention complex built very soon plus more convention hotels which will be attracted to Edmonton because of such a complex," says Jack Snowden, manager of the bureau.

NEED FACILITY

"Granted, as we get added facilities we will continue to increase the business during the 1970s, and project over $10,000,000 by 1977," Mr. Snowden said.

"Since we can only use the SportEx between April 15 and Oct. 1 each year, less about three weeks in mid-summer, and since the Jubilee Auditorium with its permanent seating conformation and rigid regulations cannot be classed as a convention facility, we in fact require right now a year round facility if we hope to continue to compete effectively for major convention business."

CHIEF REASON

"The chief reason that Edmonton has been able to double its conventions in the last few years is that it had good hotel facilities developed," said Leo LeClerc, Edmonton's industrial co-ordinator.

The key facilities are the Macdonald Hotel and the Chateau Lacombe. Not only do they have spacious meeting rooms, but they are conveniently close to one another and to Edmonton's downtown.

With the completion of the Chateau, and the work of the Convention Bureau which started in mid-1965 and gained a full time manager on April 1, 1966, Edmonton was made to look more attractive than Calgary to many seeking a convention site.

Calgary's facilities promise to be improved quickly. Plans are being made to start a $6,000,000 convention centre in downtown Calgary by early fall.

Mr. Snowden notes that conventions of 1,000 delegates or more, and especially those involving exhibits are much more profitable than smaller conventions.

"This points up our main deficiency — lack of an adequate convention centre, available to us all through the year," he said.

Calgary, on the other hand, should have such a centre by early in the 1970s.

OMNIPLEX OUT?

Omniplex, now estimated at costing $26,781,000, is considered as one way of keeping Edmonton's important convention business. High interest rates and a shortage of capital makes this task difficult.

"In the present money situation, there is little hope for the city to build and operate an Omniplex," said Commissioner S. J. Hampton in a report tabled Jan. 12, 1970.

Alternatives of a $7,000,000 trade and convention centre and a $13,000,000 trade and convention centre and coliseum containing 15,000 seats have been suggested.

FEW ROOMS

Hotel accommodation could become tight without a large trade centre to spur developers into action.

"In the near future we have only one firm commitment of an additional major hotel, the Holiday Inn of 200 rooms, although some existing hotels are likely to expand in size. The early construction of a trade and convention complex would really give a great impetus to new major hotel construction and it is needed," says Mr. Snowden.

"Already we have difficulty in obtaining accommodation for national conventions because present convention hotels are booked up for the periods required."

Two annual holidays predicted

Short duration package tours will become into wider use during the 1970s, says Bob Neville, president of Neville World Travel Ltd.

Mr. Neville sees the time fast approaching when people take two trips a winter to Hawaii, rather than one long one.

"Travel for many people is no longer a luxury," he says. "Its a necessity and the business will continue to increase."

The upper 20-25 per cent of the population, the business executives, require this travel and they don't want to hassle with finding hotels, taxis, or routes, Mr. Neville says.

MASS PRODUCED

He says two-week travel packages will be mass produced. The customer will just make the selection and receive his holiday tour with all the trimmings.

He predicts hotel rates will have to increase, but suspects that cheaply designed hotel accommodation will keep prices down for the traveller.

The new design would throw out the fancy large rooms and personal service and replace it with little more than a room and bed which could be marketed for about $8 a night.

RATES DROP

"I believe airline rates will continue to drop," Mr. Neville said. "Airlines will become very competitive in the Orient and these fares will have to drop."

Conventional runs will also have lower rates as scheduled carriers try to complete directly with chartered flights.

City seeks visitors in 1970s

Visitors will spend in excess of $150,000,000 annually in Edmonton by 1980

The projection, which means over $400,000 daily for Edmonton, is not unreasonable, says Dale Partridge, travel development officer for the city's industrial development department.

The industrial development department estimates tourist spending equalled $74,500,000 in 1969. This was a seven per cent over-all increase, and represents Edmonton's share of the $222,000,000 tourist revenue figure given by the Alberta government

"I think we can safely assume that Edmonton's tourist earnings will easily double by 1979," Mr. Partridge says.

BASED ON TREND

He bases this assumption on Edmonton's past rapid tourist growth, on long run trends, and an improving tourist climate in Edmonton

In 1965, 24,078 people checked into Edmonton's tourist bureaus. Four years later, the increased registration was up almost four-fold to 97,700.

Using nationally recognized tourist formulas, Edmonton's tourist people have projected that this means 2,571,000 visitors. Daily spending multiplied by an increasing average length of stay produces the $74,000,000 revenue estimate.

Unfortunately formulas have margins of error, but the four-fold increase in revenue between 1965 and 1969 does make it seem reasonable that a 10-year period would at least double what Edmonton has now.

Mr. Partridge gives other reasons why more people will visit Edmonton.

It is estimated that the number of Canadians and Americans earning over $10,000 annually will double in the next 10 years. They are the people who take the long holidays.

Edmonton will have a much improved plant for people to visit.

The increased leisure time which follows automation makes the four-day week or the six-week annual holiday a reasonable assumption. More people will travel to use their leisure time.

Mr. Partridge anticipates air fares, especially charter fares, will go down with the introduction of the jumbo or second generation jet aircraft.

TREMENDOUS ASSET

Edmonton's close connection with the wildnerness of the Northwest Territories and even Northern Alberta is a tremendous asset. The increased number of wealthy people will have less opportunity to find silence in their home areas and will want to travel to one of the last natural playgrounds in North America.

Europe, which now contributes half of one per cent of the visiting tourists, offers great potential. Less stringent currency regulations could spur more visitors from the United Kingdom which sends 33 per cent of the overseas tourists.

FUTURE MARKET

Japan is also considered a future viable market as the industrial, investment and business travel to this region is becoming a major factor in increasing Japanese awareness of Alberta.

Improvements to the tourist portfolio include a projected $30,000,000 Fort Edmonton Park. This dynamic park depicting Edmonton's development from geological times into the future will be a "sensational addition to the Edmonton visitor plant."

When finished in 1975, visitors will be able to enjoy the authentic reconstruction of the original Hudson's Bay Company fort, the days of the gold rush, and the life in the region before the white man came.

GOLD MINE

The Edmonton Exhibition Association is planning a Chilkoot Gold Mine, a gold rush town, and typical fields to be operating by 1973 on the existing grounds.

Edmonton's Klondike Days have been termed a "phenominal success" by the Canadian tourist industry and will be examined by a tourism congress at Ottawa in mid-February.

This could eventually lead to worldwide distribution of films on Klondike Days and increase its use as an item on package tours sold in other countries.

The possible development of Nordex as a major industrial trade fair, and the inducement of sports events such as the Canadian Summer and Winter Games are good possibilities, for this decade Mr. Partridge said.

GAME FARM

Continued growth in the popularity of existing features in the Edmonton area must help. The Alberta Game Farm drew 1,250,000 visitors in the past year.

In relation to the population of the surrounding area, this figure makes the game farm more successful than Disneyland.

"Al Oeming is making several major expansions in his exhibits at the Game Farm for 1970," Mr. Portridge said. said.

Edmonton International Speedway drew 210,000 people in 1969. In 1965 there were 50,000 visitors. The sudden jump in attendance follows its increasing reputation throughout the West, Mr. Partridge said.

The auto racing complex provides track for drag racing, sports car courses, stock car racing and all in-between classes. It features the Klondike 200 Can Am Challenge Cup Race which rates as the second largest sporting event in Canada.

The increasing visitor traffic can be seen by the rising attendance at Elk Island National Park. More than 300,000 people registered in 1969 for a 31,000 increase in one year.

Mr. Partridge sees 1970 as an expanding tourist year. In 1969 four trailer caravans containing 627 trailers and 2,020 people came to Edmonton. Already there are between six and 10 slated for 1970.

Edmonton starts 1970 with two new motels, a new motor-inn, and 43 new or renovated restaurants to handle the tourist inflow.

Tourist officials believe the federal government's policy of tight money will not hurt tourism. People place high priority on their vacations and will sacrifice consumer goods for holidays.

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ROYAL ALEX PLACE

This outstanding building on the corner of 101 St. and 111 Ave. has just been completed by Integrated Building Corp. Ltd. and Belvedere Developments [illegible] 7 floors of apartments and an attached parkade. The exterior is finished in precast concrete and masonry. Many Doctors have taken advantage of this ideal location for their offices. X-Ray, and laboratories, drug store facilities are located in the building.

Integrated Developments Ltd. and Ithacan Development Corporation Ltd. is redeveloping an older residential area in Edmonton in a joint venture, with this sixty-seven-unit apartment to be constructed this spring at 99th Street and Saskatchewan Drive to contain pool, tennis courts, underground parking, etc.

GRANDIN PARK DEVELOPMENTS

A 150 acre land development program in St. Albert by Integrated Building Corp. Ltd. and Belvedere Developments Ltd. They have serviced 84 lots last summer and now are preparing to service another 130 lots. Grandin Park features a well planned subdivision with many large beautiful trees.

ROYAL OAK TOWERS

2—10 Storey Towers on 134 Avenue & 97 Street.

The project was started last winter, one tower is completed and occupied, the second one will be completed by February 15th. The project is owned and managed by Royal Oak Apartments Ltd. It features very large balconies, some as large as 8 x 20, and underground parking with complete landscaping over the parkade.

RIVERSIDE TOWERS

86 Street and Jasper Avenue — 286 Deluxe Suites.

Land assembly of one complete block of land has been completed, plans have been approved by the City and construction will start early this spring. It features underground parking with the surface landscaped, swimming pool, saunas, exercise and recreation rooms. All suites have a magnificent view of the river valley.

This project is a joint venture between Ehert Construction Ltd. and Belvedere Developments Ltd.

THE MARQUIS

9725 - 106 Street

This 121 suite apartment features an attached parkade with surface landscaping, swimming pool, saunas and exercise room. The view of the river valley is terrific from the large curved balconies. The building is presently under construction and should be completed this summer. It is a joint venture between Don Cherry and Belvedere Developments Ltd.

THE LAMPLIGHTER

121 Street and 102 Avenue

141 Suite — 24 Storey Highrise Apartment

Construction of this apartment has just started and should be ready for occupancy by late summer. Here again Royal Oak apartments has put all the parking underground and landscaped the surface. The built-in barbecues, picnic tables, tennis court and countless of beautiful trees will make this development a wonderful place to live.

PRIDEVIEW MANOR

8310 - Jasper Avenue

This apartment was especially designed so that every suite would have a magnificent view of the River Valley. Construction is with reinforced concrete. It is owned and managed by Pride Homes. Ltd.

NEW EDMONTON POWER PLANT
. . . will be ready in June

Power demand in Alberta 'soaring'

During 1969 electrical power demand grew at a fantastic 16 per cent in Alberta, requiring over eight billion kilowatt hours.

At this rate of growth, power generating capacity would have to be doubled in five years, providing a tremendous boost to the construction industry in the province but creating a financing nightmare for the power utilities because of the world-wide shortage of money, escalating capital costs, high interest rates and pegged rates of return.

It is anticipated growth will settle back to better than 10 per cent during 1970.

The two largest producers of electrical power in the province are Calgary Power Ltd. and the City of Edmonton. However, the greatest growth has been in the northern part of the province, which is serviced by Canadian Utilities, Limited and Northland Utilities, Limited, both Edmonton-based. During 1969 the latter firms both sought and obtained the right to a higher rate of return, justified on the basis that interest on money required for necessary capital installations had reached a critical stage.

OUTLOOK GOOD

However, the long-term outlook for the province looks bright, and despite problems, it is necessary for the electrical utility industry to continue growing. It is one of the key factors in future development, serving industry, commerce and the general public.

During 1969, Canadian Utilities commissioned its new 150 megawatt coal-fired unit at the Battle River power plant, 120 miles southeast of Edmonton.

Other units under construction include:

Edmonton Power's 159 MW gas-fired steam turbine, to be commissioned later this year.

A 25 MW gas turbine at Rainbow Lake, to be commissioned this spring by Canadian Utilities.

The first unit at Calgary Power's Sundance plant, on the south shore of Lake Wabamun about 50 miles west of the city, will be commissioned in 1971.

300 MW UNIT

Rate as a 300 MW unit, it will have the capacity to deliver 286 MW to the Alberta grid system at peak load.

During 1972 Calgary Power will add a 108 MW unit at the Bighorn hydro plant. This project created a storm of protests in the provincial legislature last spring, when conservationists, wildlife officials and farmers protested that insufficient study had been carried out on the possible harmful effects of the dam. Following a stormy hearing, the firm received approval from the provincial government.

By the end of 1972, when all these units under construction have been commissioned, an additional 728 MW will have been added to the system, bringing the total power capability to 2,600 MW.

From then through 1979, tentative plans call for at least an additional 2,500 MW to bring total generating capability to over 5,000 MW, or 2½ times the capability at the end of 1969.

The proposed second gas fired unit for Edmonton Power will come on line in 1973. It will deliver 159 MW at peak.

Calgary Power will have completed work on its second 300 MW unit at Sundance and commission it in 1974.

The following year the city's third gas fired unit and a 190 MW unit at Brazeau will go on line.

After that, plans begin to get more tentative, although Canadian Utilities will be commissioning a 150 MW unit in 1976 at either Forestburg or Grande Cache.

The biggest unit in the province 500 MW, which will deliver 475 MW to the grid, will be commissioned that year by Calgary Power at Sundance.

Edmonton's fourth unit will go on line about 1977 and another 500 MW unit at Sundance in 1978. All told, it will be a busy decade for construction personnel.
END INSERT

AMPLE SUPPLIES

The province has ample supplies of coal, gas and hydro energy to meet growing demands for many years. Of the total additional capability to be added during the next decade, 70 per cent will be fueled by coal, 20 per cent by gas and the remainder by hydro energy.

Much of the increased 1969 output of some eight billion KWH has been used by industries associated with oil and gas. The number of customers in the province during the year increased to about 475,000, of which 59,000 are farm customers.

As well as adding generating capacity during 1969 the utility corporations have extended their network of transmission and interconnecting lines and built many miles of lines of 138,000 volts or over. Transmission lines such as these form a major part of the investment in power facilities and more of these larger lines are slated for construction during the coming years.

The outlook for 1970 is good.

It is unlikely the high rate of increase experienced in 1969 will be duplicated, but the increase will still be in excess of the normal growth of the past few years. Growth had been running about 10 per cent a year.

From many angles the utility industries' contribution to Alberta's economy will be significant, not the least of which will be a good volume of heavy construction. The power generated and used per capita will increase, with all that this contribution means in the way of new industries and in labor saving devices.

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EDMONTON—CALGARY—GRANDE PRAIRIE

City-based power companies will spend $21 million in '70

Alberta's two Edmonton-based private power companies will spend about $21,000,000 this year on capital improvements.

Canadian Utilities, Limited and its subsidiary the Yukon Electrical Company Limited expect to spend approximately $17,271,000 for capital additions in 1970. This represents an increase of $4,116,000 over the capital expenditures in 1969.

Northland Utilities Limited will spend about $3,613,000.

Of CUL's total $11,580,800 will be spent on generating stations. This includes $6,800,000 for progress payments on contracts for structures, improvements and equipment for construction of the H. R. Milner 145 megawatt coal-fueled steam turbine generating station to be located near Grande Cache.

SERVE PEACE

The new plant is being built to meet the load requirements of the McIntyre Porcupine mines as well as the future load growth in the company's existing service areas. It is to be completed and connected to the Alberta grid in 1972. The plant is expected to cost $28,000,000 in total.

Some $3,180,000 will be spent for the purchase and installation of a 30 MW gas turbine to be added to the Rainbow Lake gas turbine station. This unit is necessary to meet load requirements in that area.

Another $1,487,000 will be spent to cover progress payments on contracts for the 150 MW unit now in full operation in the Battle River station. The addition of this plant and the new unit at Rainbow Lake will bring the generating capacity of the combined Canadian Utilities and Northland Utilities system to 327 MW.

A further $32,000 will be spent on some smaller generating stations at Fort McMurray, Sturgeon and Drumheller.

NEW LINES

There will be $2,405,000 for high voltage transmission lines and sub-stations.

These include $650,000 for construction of about 60 miles of 144 IV line from the Mitsus substation to serve the Nipisi oilfield. About $2,630,000 will be spent on distribution systems and a further $655,000 on other facilities and equipment.

It is expected that about 2,000 new customers will be added to the system. Kilowatt hours sales are expected to increase by about 23 per cent in 1970, the peak power demand by over 14 per cent and gross revenue by about 31 per cent.

About $513,000 is expected to be spent in the Yukon Territory.

This will include $133,000 for the construction of a line to serve the Venus Mine located south of Carcross. An estimated $81,800 will be spent for additional capacity in the company's Yukon diesel plants to meet expected load growth.

NEW AIRPORT

Among these, the capacity of the power plant at Old Crow, located 85 miles within the Arcitc Circle, will be increased as a result of the construction of the new airstrip, a new school and other developments in that community.

Northland will spend about $3,613,000 of which $2,976,000 will be spent in the electric division. This will include $63,000 for additional generating equipment in Jasper and in Hay River, N.W.T.

About $1,084,000 will be spent on transmission lines, which include the construction of 100 miles of 144 KV line from Nipisi to Peace River. This line is required to increase the capacity in the Peace River area and will be built for eventual conversion to 240 KV.

The balance will be spent on distribution systems, extensions to new customers and on other facilities and equipment.

Kiliwatt hour sales are expected to increase 20 per cent over 1969, the peak power demand by 21 per cent and gross revenue about 29 per cent.

800 CUSTOMERS

About 800 customers will be added to the system which will include 85 new oilfield customers.

The firm will spend $637,000 through the gas division for services to 550 new customers, extensions to three new communities and improvements to existing transmission and distribution lines as well as other necessary equipment.

Both CUL and Northland have received approval from the Public Utilities Board. This ruling follows an early decision that an 8½ per cent rate of return was necessary if the firms were to continue to be in a position to meet the growing requirements for power in the areas served.

FIRST INCREASE

Factors which forced the company to seek its first general rate increase in 43 years of operation were the rising costs of operations and the escalating cost of obtaining capital, say officials.

Final approval of the rate schedules is subject to further hearings by the board.

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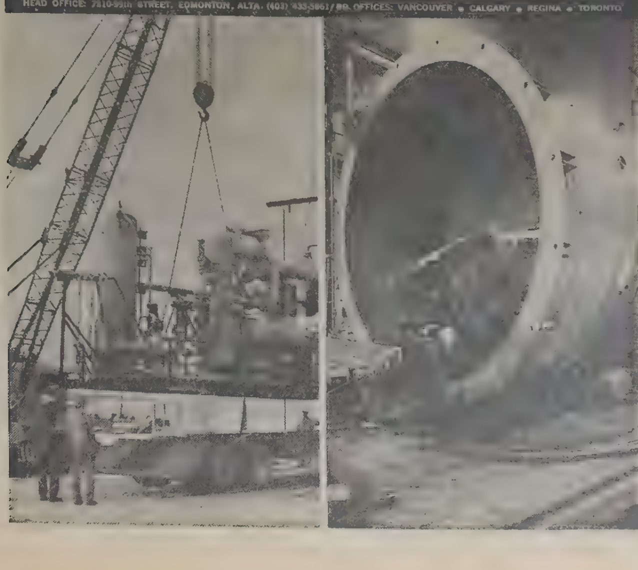

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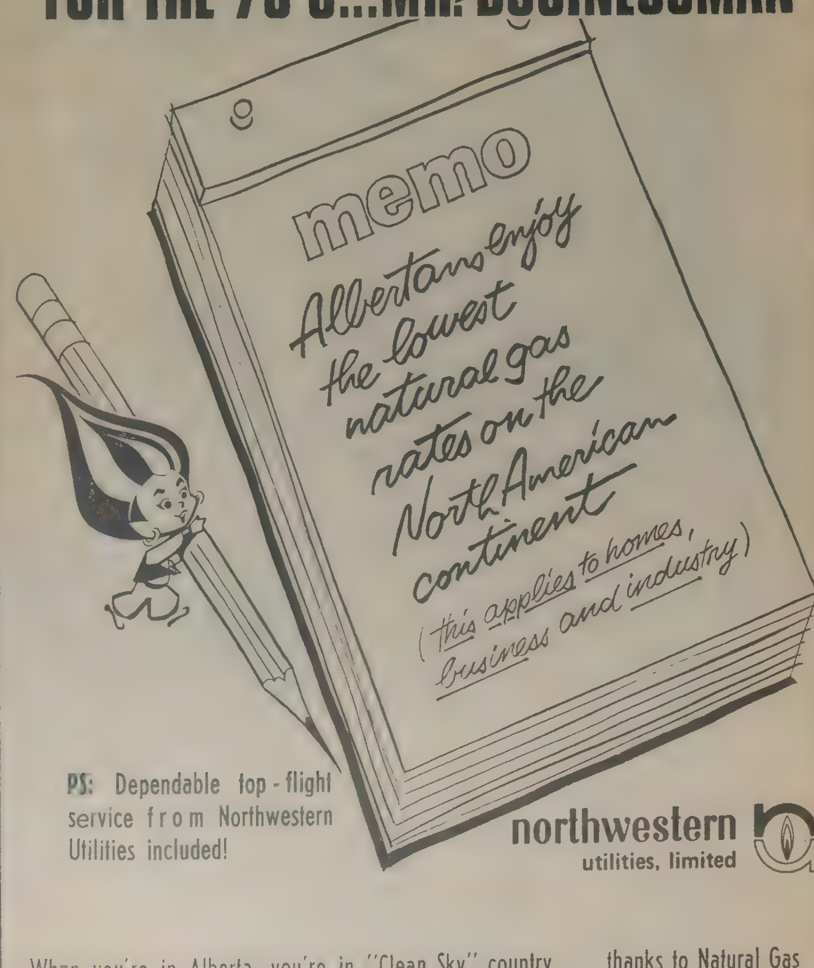

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Calgary Power plans long term increase

Last year Calgary Power Ltd. spend $36,100,000 on capital expansion. In 1970 and 1971 it will require approximately $45,000,000 in each year.

"Our long term projections indicate these expenditures will continue to rise as we build to meet the rapidly expanding Alberta demand for power," says M. M. Williams, the firm's executive vice-president.

"We estimate that our capital budget will have risen to $68,000,000 by 1975 and $100,000,000 by 1980."

Calgary Power sales rose almost 10 per cent in 1969 to about $50,000,000 but the plant investment required to generate those sales stands at $365,000,000.

"We think, therefore, that the increased cost of money, represents the greatest single challenge to the industry," said Mr. Williams.

"Inflation in wages, equipment costs, taxes and other business expenditures are affecting most areas of industry."

He said the outcome of proposals set forth in the federal government's White Paper on taxation will also play an important role in determining the cost of financing utility expansion plans in Alberta.

"The Paper proposes to return 100 per cent of the income tax rather than 95 per cent as of now, but in so doing proposes that the shareholders would no longer be entitled to the dividend tax credit. Previously Ottawa had retained five per cent of the income tax to offset the 20 per cent dividend credit taken by shareholders.

"The reason for the change and, for what appears to be a highly discriminatory treatment, is that since Ottawa retains none of the tax, it cannot in equity give a credit for something it does not get. It would seem that in this case the White Paper has confused the collection of taxes with how government funds are spent."

Calgary Power continues to be a tax paying corporation and any arrangement as between Ottawa and the provinces in regard to inter-government transfers of funds does not alter that fact and hardly justifies double taxation of the shareholder, a burden borne by no other shareholders of a Canadian company, he said.

Calgary Power has two major expansion projects underway. The first unit at the Sundance thermal plant west of Edmonton on Lake Wabamun will open this year to boost the system's net capability by some 285 megawatts (MW) to 1,524 MW.

This unit, the first of four planned for the 1970s, was installed at a cost of $50,000,000.

The second major project is the Bighorn Dam, a joint project with the government of Alberta. Costing more than $30,000,000, the development will be generating 108 MW by mid-1972.

HEAVY LOAD

Projections show that the Calgary Power service area — representing two-thirds of the province's electrical demand — will draw a load of 1,703 MW by 1975 and 2,710 MW by 1980

"To generate these loads with the proper safety margins we must provide the equipment to generate 3,100 MW by 1980 — about 2½ times what we are capable of producing now."

Mr. Williams said Calgary Power has been able to counter the effects of rising costs through increased productivity and careful management. "In reality, despite the cost spiral, the per-unit cost of electricity has tended to come down."

He pointed to the company's decision to enter the thermal generation field as a major factor in increasing productivity. "The mix of hydro plants for peaking power and huge thermal units for base load is ideal for producing the cheapest power possible." (The company operates 12 hydro plants, and one huge four-unit thermal plant.)

KEY ROLE

"We also feel careful management has played a key role in keeping consumer costs down. In the nine year period from the turn of the last decade to Jan. 1, 1969 our sales rose 147 per cent while the size of the staff only increased 47 per cent. In that same period, taxes, other than income taxes, rose 633 per cent and operating expenses increased 127 per cent."

Calgary Power employs 1,096 people, located in 75 offices across the service area.

The company serves more than 143,000 customers. However, as a wholesaler to the cities of Red Deer and Calgary and the towns of [illegible] Macleod, Cardston, Blairmore and Ponoka, together with 'booster' contracts to Lethbridge and Medicine Hat, it is estimated that more than [illegible] Albertans use power produced by Calgary Power.

TWO PROJECTS

The company's 1970 capital expansion program will centre on plant construction at Sundance and Bighorn. In 1970, $23,900,000 will be spent at Sundance ($20,515,000 in 1969) and $8,440,000 at Bighorn ($5,449,000 in 1969).

NEW FEDERAL FORESTRY LAB
. . . will boost research for growth industry

Clover Bar station goes on the line

In June this year, the first unit of the new Clover Bar Generating Station goes on line.

Three other units before 1980 will give Edmonton Power — Generation and Water Treatment the capability of satisfying the electric power needs of a community of 850,000 persons. The planners project a population of 672,000 for Metropolitan Edmonton by 1981 so even the peak-load demand insurance is built in.

It should be explained that there are two Edmonton Powers, both city owned. Edmonton Power — Generating and Water Treatment creates the electricity (and treats the water for consumption over a wide metropolitan area) Edmonton Power — Distribution gets that electricity to where it is needed by the consumer within the city limits.

BIG FIRM

At present, Edmonton Power is generating about one quarter of Alberta's electrical power from its Rossdale Station, on the north river bank just east of the 105th Street Bridge. When the first two phases of the new Clover Bar Generating Station, on the eastern bank of the river just north of the Chemcell plant about 130th Avenue, are on line by 1973, Edmonton Power will be generating almost a third of the province's electricity.

As well, it will greatly reduce the demand on the downtown Rossdale Plant's 10 gas-fired boilers, which currently operate on the peak-load top limits line.

The first phase of the Clover Bar Generating Station is preparing for commissioning now, and in June of this year goes on line, its generating capabilities rated at 165 megawatts, with a peak rating of 175 mw.

Edmonton Power — Generating Superintendent is William Kirkland.

NEW IDEAS

The marketing arm, Edmonton Power - Distribution directed by General Manager C. Z. Monaghan sees a number of "second century" innovations and services available electrically to Edmonton homes before the end of this decade.

Walls could be finished with pre-fabricated electro-luminescent panels, lighting home and office interiors and allowing for interior decoration color changes through frequency control by means of special controls.

Home computerization is on the near horizon, allowing housewives to control appliances by that method, carry out audio-visual home shopping and keep a guarding eye on the home and its activities while out.

Built-in vacuum system for cleaning may be taken for granted in most homes.

Electric-motivated air conditioning systems, in fact complete environmental control of homes and offices, will be possible through use of electro-static air filters combined with air conditioning and heating systems, will be available.

High-frequency ovens made possible by electricity will allow homemakers to cook under cool and pleasant conditions at all times.

Three pulp mills set for 1970s

Three new pulp mills with an initial investment in excess of $150,000,000 are the major projects in the Alberta forest products industry during the 1970s.

"There has been no real change in the status since last year," says R. G. Steele, Alberta's director of forestry.

The three firms involved — North Western Pulp and Power Ltd., with the only operating pulp mill in the province at Hinton, McMillan Bloedel Ltd., with a proposed mill at Whitecourt, and Procter and Gamble Ltd., with a proposed mill south of Grande Prairie — are all vitally concerned about money.

However, says Mr. Steele, "there,has been no indication what-so-ever that any of the intend to postpone development."

All three firms are carrying out exhaustive feasibility studies, involving technical details, transportation, markets, etc. But "the prime concern is money costs."

P & G are to make a decision on their proposed mill by July 1 this year. The other two firms have until Jan. 1, 1971 to begin construction.

BEGIN JULY '73

All three are to begin prodction not later than July 1, 1973, under terms of existing contracts with the povincial government.

The province's only other pulp forest — at Rocky Mountain — is still attracting attention, but no one has made any proposal in connection with the area.

Another major project, which at this stage involves only a small investment, is the development of a sawmill at Slave Lake to handle poplar.

Alberta Hardwood Co. Ltd. is spending $250,000 initially to put in a modern sawmill. The firm has purchased quotas which would allow it to harvest 56,000,000 board feet a year, and has agreed to have facilities capable of handling that volume by Aug. 1, 1971.

Eventually, investment could reach $7,500,000, with facilities to produce poplar furniture components, plywood, chipboard, chip production and possibly pulp facilities.

The lumber industry, which last winter had one of its brightest seasons, is again experiencing difficulties.

PRICES PEAKED

Prices peaked in the first three months of 1969 and have now deteriorated almost to the point they were at in July, 1968.

The main reason for the decline is a decrease in house building in the United States and Eastern Canada. The local market has been holding up well, but the bulk of Alberta's lumber production is exported.

Over the long term, with the anticipated growth in housing needs, prospects for the industry are good. But there is need to diversify, so producers are not tied quite so closely to the fluctuations of the housing market.

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In our news, we endeavor to provide the maximum coverage of all newsworthy events in the city and in northern Alberta. But we even go further and for several years have had a staff reporter covering the Western Arctic — an area of increasing importance to the growth of Edmonton.

Within the next month, our Arctic reporter will move with his family to Yellow-

Other additions to The Journal in recent yea page five, giving a wider selection of background co Charles Lynch . . . A full-time editorial cartoonist w . . . The Journal of Leisure section on Friday caters t tainment and the arts . . . A wide range of personal int ing, gardening, hunting and fishing, teen-agers' probl

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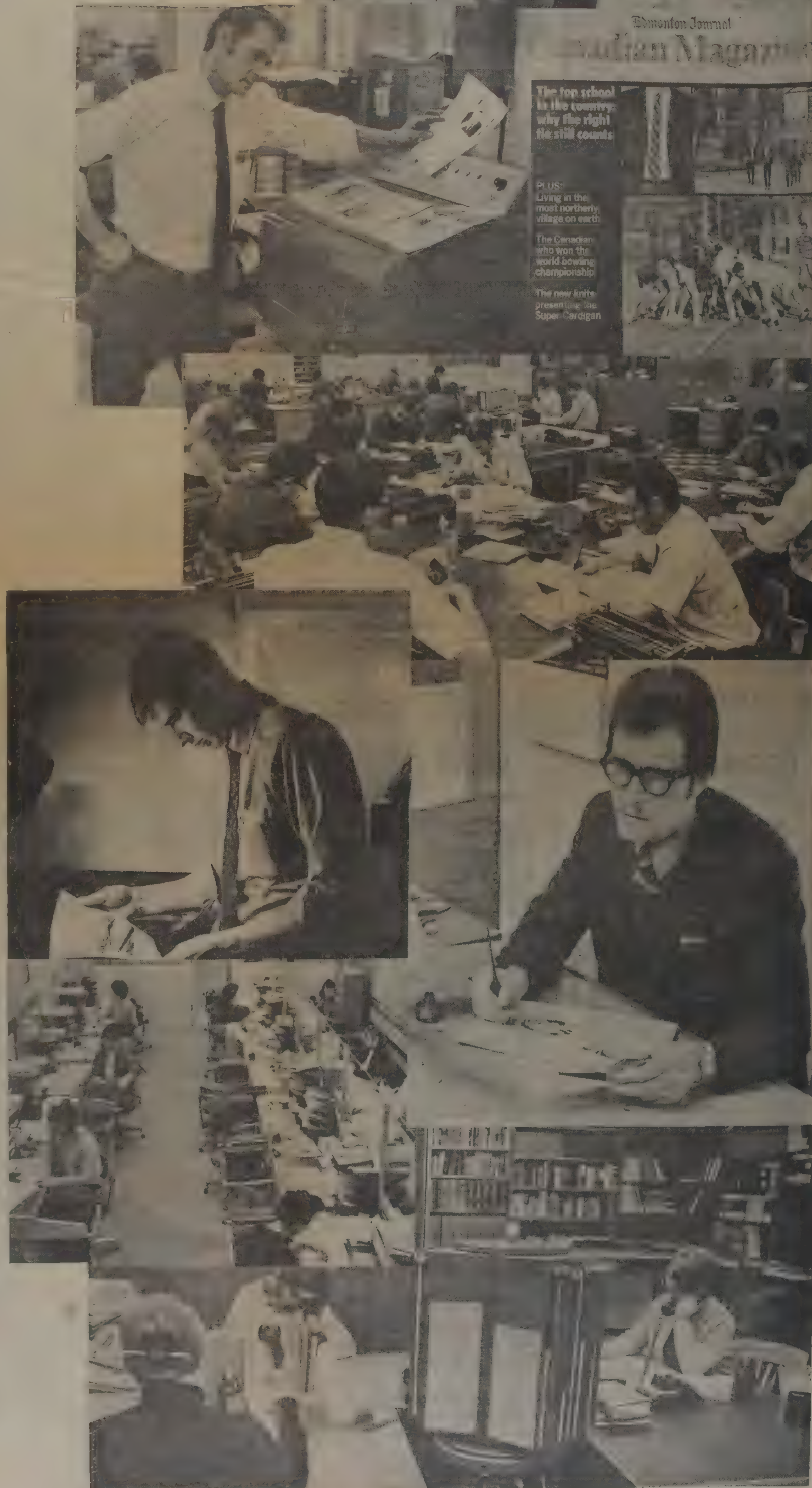
PROGRESS

st growing cities, and The Edmonton Journal one of daily circulation grew by 40,000 and is now over . . This is one of the largest circulation gains in Can- lume of news to our readers during this period . . . aily average in 1969 . . . All told, we carried 60,617 — the equivalent to over two full-sized novels every sed and we now employ 416 full-time people and 90 dramatically during the decade, putting more



knife and will be based there for his fascinating assignment. This is the first time any Canadian newspaper has had a staff writer stationed full-time in the N.W.T.

We also have the column by Edith Josie from Old Crow . . . "Here are the News." This is one of the most unique features in North America.

During the decade, the Southam News Services have been developed extensively until today The Journal is represented by SNS in bureaus in Ottawa, Toronto, Quebec City, Washington, New York, London and Paris. These bureaus are all staffed by Canadian correspondents who file daily special reports to this newspaper.

To strengthen our foreign coverage, we subscribed to the New York Times News Service and also receive regular reports from The Times of London.

Our financial reporting has vastly improved in recent years and today we bring in from Toronto on data speed wires the very latest quotes on the stock exchange there and from other important Canadian exchanges.

The Canadian Magazine has been added to The Journal each week, with Canadian Homes once a month. Our Leisure section has taken on new dress, content and appeal and our weekly TV listings on Fridays are highly popular.

lude the expansion of the editorial pages to include t on world events by prominent journalists such as lded to our staff to give cartoons a local flavor broad readership interested in the worlds of enter- s is served with special columns on such areas as ski- and various hobbies.

Alberta and the Arctic, a circulation area of over y daily newspaper in the world.

ton Journal

ER BETWEEN TORONTO AND VANCOUVER

Sciences will dominate industry of new decade

The 1970s will witness a great drive to fully use the abilities of science and engineering to develop Canada economically, socially and politically.

It will constitute a dramatic step towards effectively establishing a unique Canadian national identity.

And Alberta will be a test bed for a great part of the activity making up this remarkable national adventure.

This is a summary of the prospect for the decade ahead as seen by Dr. Harry E. Gunning, head of the department of chemistry, University of Alberta.

NO DREAMER

Do not dismiss it as the unworldly daydream of a romantic academic! Besides being a professor and, inter alia, a member of the advisory council, National Research Council and chairman of the advisory committee on chemical research, Defence Research Board of Canada, Dr. Gunning has close connections with industrial life. He is a physical chemistry consultant to Imperial Oil Enterprises Ltd., Standard Oil of New Jersey, Syncrude Canada Ltd., Chemcell Ltd., Dawes Laboratories Inc. and Dunlop Ltd.

Furthermore, his forecast starts by taking account of the 600 page draft report "Reviews of National Science Policies: Canada," produced by the important international Organization for Economic Co-operation and Development (OECD).

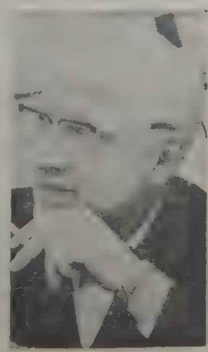
GREAT POTENTIAL

Canada is a member-nation of OECD and a distinguished team from the directorate of scientific affairs of the organization spent a great deal of time in this country in order to carry out the study for the report. They point out that in the Second World War Canada by a concerted national effort welded her scientific capacity into an effective force for victory. And they add that her present much greater scientific potential is available and uncommitted. So we should define our national goals as part of a broad plan fully to utilize this potential. They proceed to suggest ways and means of modifying Canadian institutions and policies to this end.

Dr. Gunning says that in the light of the report there are mounting pressures on Ottawa to spend more on science and technology for developing Canadian industry.

DUAL DRIVE

He points out that the whole question has an important bearing on the problem of U.S. domination of Canadian industry. For many Canadians, he says, this domination seems to constitute a loss of national identity. So the underlying philosophy supplying motive power for



DR. HARRY GUNNING

new policy is political, not just economic in nature.

As more and more Canadians become concerned about this question of domination, Dr. Gunning is sure stress on Canadianization of industry will be a feature of the drive to implement recommendations of the OECD team.

So all these factors lead him to expect big national science programs to be fielded in the next few years, especially programs dealing with themes such as pollution, utilization of resources, etc.

GREAT POTENTIAL

Dr. Gunning expects the U of A to be working on some of these subjects. An example of the sort of thing might be hydrocarbon upgrading, relevant to the oil sands.

But these materials can only be developed if there is a lot of research going on in the area, warns Dr. Gunning.

Alberta is going to be a real testing ground for many of these new programs, he argues. This is because the province possesses so many valuable resources. But the significance lies deeper than in the exploitation of the obvious abundances.

Hydrocarbon resources are limited. They are not, for example, like timber, which can be regrown. Also, people in other places have similar resources and can compete for markets. So, says Dr. Gunning, in the long term such resources are an unhealthy basis for an economy.

DEVELOP PEOPLE

A more healthy basis is industry that puts a high degree of manufacture into raw materials, especially if it involves great scientific or technological expertise.

Edmonton is well placed in this respect because besides being close to the raw materials it has the university, which is a rich reservoir of talent and research potential. But the university's potential is not yet being fully exploited. This causes some frustration among university personnel, many of whom are asked to go all over the world to make their expertise available, but are not sufficiently used here in Alberta.

In the department of chemistry they are developing a lot of chemicals that look promising from the point of view of their antibiotic qualities. This is the sort of thing that could help form the base of a pharmaceutical industry.

TEST FACILITY

But one difficulty in establishing such an industry is the need for a testing facility. Nowhere in Canada is there a suitable testing place for antibiotics, for example, to discover if there are any side effects. This is the most expensive aspect of the whole operation.

And it is not, continues Dr. Gunning, just a matter of testing simple antibiotics. One might want to test the chemical as, for example, a fungicide. These are of enormous importance. Some are used to treat toxic infections. Used in the U.S. in another form to kill nematodes (minute animals that feed on the root hairs of plants), they caused the yield of citrus crops to increase by a factor of 10.

So the aim is to test for a broad spectrum of possibilities. And some of the results will of course be quite unforeseen.

LARGEST IN CANADA

At present the U of A chemistry department, probably the largest in Canada, produces about 50,000 new chemicals a year. About 400 separate research programs are in progress simultaneously.

What Dr. Gunning envisages is that testing of the kind described could be carried out here in a new separate centre, in which the university could co-operate. Such a test centre would need to be staffed by trained technicians, but could make use of the university's specialist scientists.

Additional bonuses would accrue to the community from the further inter-action that would be bound to occur between the test centre and the university. All sorts of side benefits, new lines of thought and research, etc., would, he predicts, be thrown up, to be tested in turn.

The results of the great drive on the science and industry front following the OECD report may not show in major economic growth in the next five years or so. Dr. Gunning thinks it will be reflected in that period more by a regrouping of resources and a reshaping and repowering of the relevant institutions and organizations.

And he sees it as a three-way effort involving government (both federal and provincial), industry and the universities.

The ultimate results for Canadian well-being and Canadian self-realization can be of profound and enduring significance. Dr. Gunning is optimistic that Canadians will rise to the exciting challenge.

Huge storage tank

Last summer Interprovincial Pipe Line Company began work on the two largest oil storage tanks in the area. In this shot of the interior, two men stand on what was to become part of the floating roof of this 290,000 barrel capacity tank. Now almost completed, the two tanks bring Interprovincial's total city storage capacity to 2,551,000 barrels in 21 tanks.

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Outlook for wheat glum

The recently-announced sale to Russia of 75 million bushels of Canadian Wheat has caused an up-dating of the wheat outlook for Canada in 1970.

The updating was done by the Economics Branch, Canada department of agriculture, following the annual agricultural outlook conference Nov. 24-25.

The updated outlook indicates no substantial change in the indicated acreage for the 1970-71 crop year. The original outlook indicated that only 20 million acres of wheat should be planted to wheat. The outlook does not indicate in detail what farmers should do with the surplus 10 million acres.

The economics branch predicted there would be somewhat higher world wheat exports this year than last "with relative stability in prices."

There would be no reduction in stocks in the hands of major world exporters and "no sharp movement" in the world situation.

SITUATION CRITICAL

With 1.5 billion bushels of wheat available in Canada, "the wheat situation and outlook is critical."

That's according to Geoffrey Hiscocks, of the economics branch, Canada department of agriculture, Ottawa.

The 1969 crop is estimated at 685 million bushels and the 1968 crop year ended with 850 million bushels on hand — the highest ever. Of this sum, last year, 370 million bushels were on farms. In addition, much of the crop in northern Alberta was not harvested this year due to unfavorable weather conditions.

Australia, France and the United States also have large carryovers, Mr. Hiscocks said. "Larger crops have been harvested in Asia. Eastern Europe and in Canada, with slightly smaller production elsewhere." World wheat production is lower than last year, but is significantly above the average of the last five years.

EXPORTS DOWN

"Canadian wheat exports to developed countries — the traditional markets of Britain. Western Europe and Japan — have been declining. So have wheat exports from other countries."

Mr. Hiscocks said the increase in the Japanese wheat market has not offset the import decline in other countries. "This wheat import decline," the economist said, "is due to smaller bread consumption and larger domestic wheat production."

Developing countries are a relatively small market for Canada with some cash and some aid shipments. The Communist countries, however, have been "very large buyers and are still important, but much smaller."

SALES STEADY

Mr. Hiscocks said Canada exported about 300 million bushels of wheat and flour last year "and we will do about the same this year. A sale to the U.S.S.R. for shipment this year could raise this figure."

The economist said that about 150 million bushels of wheat would be used for food, feed and seed and total sales this year will reach 450 million bushels.

"That leaves stocks next July 31 at a fantastic one billion bushels, including an extra 230 million on farms."

World price competition has been so severe that initial prices are now $1.50 per bushel basis No. 1 northern at the Lakehead. "So far this crop year, export prices have not been leaving much to add to a final payment. With the large supplies amongst exporters, this severe competition will remain."

LITTLE HOPE

Opportunities to increase world trade in wheat and flour or to increase Canadian exports "are few," according to the CDA economist. "Importing countries, both developed and Communist, are continuing to grow more through national price and production policies that favor their own farmers. Shipments to developing countries are limited by foreign exchange and aid commitments."

Mr. Hiscocks said that only 400 million to "possibly 500 million" bushels of wheat can be delivered from farms. "That is, about a five bushel quota." The economist said that the wheat area would have to be cut to "no more than 20 million acres for each of the next two years. Even this level of acreage and production will only make a start on reducing the stocks."

Canadian foreign exchange was hit a body blow between 1966 and 1968 when wheat exports declined from $1.144 billion in 1966 to $.742 million. Wheat accounted for 11.7 per cent of total exports in 1966 to 5.4 per cent in 1968. This loss of $402 million in wheat exports reduced Canada's gross national product by one per cent.

The decline in wheat sales have hit the prairie economy hard, Dr. H. Bruce Huff, an economist and recognized world wheat authority, University of Guelph, says.

During 1960-64, it was estimated that wheat production accounted for 2.9 per cent of Manitoba's gross provincial income. In Saskatchewan this figure was 15.1 per cent and in Alberta 6.6 per cent

STRONG DEPRESSANT

Prof. Huff said that "any reduction in wheat production, particularly of the magnitude projected, cannot have but a strong depressant effect on these provinces' economies."

He suggests both the provincial and federal governments expand "monetary and fiscal policies for this (the prairie) region."

'Certain fiscal measures for selected regional growth have been introduced. It may be desirable for these measures to be increased," he says.

In the current crop year — 1969-70 — producers can expect delivery quotas of less than five bushels, per specified acre. This would allow the average prairie producer to deliver slightly more than 15 bushels per seed acre. This leaves, probably, more than 12 bushels per seeded acre on average prairie farms as an addition to carryover levels

If the seeded wheat acreage is cut to 20 million acres, during the next three years it is estimated that some 10 million acres on the prairies must be diverted to some other use. Prof. Huff said.

Oilseeds, feed grains and livestock production "are possible alternatives."

The shift from wheat production into other enterprises is held up by climatic and soil conditions, capabilities and preferences of managers and availability of capital to make these productions changes possible.

Prof. Huff said these potential land shifts will result in a downward pressure on land prices continuing. He said that "off-farm employment will be relatively more attractive, if opportunities exist for off-farm migration."

This recent decline in farm cash receipts due to small delivery quotas has been so severe that many producers have been unable to meet expenditures such as taxes and mortgage payments.

Capital resources such as land and machinery and money invested in capital resources are likely to be lower, Prof. Huff said. "As wheat sales decline, those capital assets which are fixed in wheat production will remain, but with a decline in market value."

But capital resources able to move out of wheat production and even out of agriculture will have a high value. "Machinery for wheat production is quite specialized and will likely remain in use in the grains enterprise." Sales of new machinery should fall "substantially in the shtrt-run."

There are three "major priority areas" that require review of current government policies. These are measure to:

(1) Control wheat production.

(2) Improve producer incomes.

(3) Increase export sales.

To overcome some of these problems, Prof. Huff suggests:

(1) Basing quotas on volume of production rather than on acreage.

(2) Making it possible for producers to buy and sell quotas.

(3) Establishing separate quotas for feed grains.

(4) The producer should be told before planting the minimum percentage of his quota he will be able to deliver to the wheat board during the coming season.

BLEAK WINTER SCENE DOWN ON THE FARM
. . . reflects mood of many farmers these days

Egg prices may dip in 1970

An oversupply of commercial eggs is predicted for Canada in 1970, particularly in Manitoba and Ontario

Alberta's poultry commissioner, G. R. Milne, says that egg supplies in this province are geared for self-sufficiency through the marketing quotas set by the Alberta Egg and Fowl Marketing Board. However, prices here are bound to be influenced by the price of eggs in the exporting provinces.

If the predicted overproduction materializes, producer prices, particularly in the first half of 1970, may decline to cost-of-production levels. However, this overproduction may be tempered by the high incidence of Marek's disease in growing pullets which is prevalent in Eastern Canada and the U.S. Egg prices in the second half of 1970 will depend upon whether or not pullet placements are cut back during the first six months.

NATIONAL BOARD

Proponents of the National Egg Marketing Agency, which may become a reality in 1970, feel this organization would bring greater stability to the egg market across Canada, but Mr. Milne does not think its effects would be felt until 1971.

Alberta's commercial egg production in 1969 will probably total 40.375,000 dozen. Although this figure represents an increase of three per cent over the 39,189,000 produced in 1968, eggs were in somewhat short supply. It is estimated that an average of 6,000 dozen eggs were imported per week during 1969.

The Alberta Egg and Fowl Marketing Board, which came into being last year, was successful in bringing some stability to the market, according to Mr. Milne. Its main problem, he says, was pressure from Manitoba where a record, uncontrolled expansion took place. He reports that the Alberta board recently issued increased quotas to existing and new producers to cover this year's esimated deficiency of 6,000 dozen eggs per week.

Prices to Alberta broiler growers are expected to be lower in 1970 than last year because of competition from other areas of Canada. The probability of lower feed costs, however, should enable efficient growers to obtain a reasonable return on their investment.

The Alberta Broiler Growers' Marketing Board estimates broiler sales of 33,000,000 to 34,000,000 pounds in 1970 with a projected 50,000,000 pounds by 1975. Sales are expected to be in excess of 70,000,000 pounds by 1980 and the number of growers will probably have increased from 111 to about 198.

Last year's broiler chicken sales in Alberta, says Mr. Milne, should exceed 31,000,000 pounds, representing an increase of 15 per cent over 1968.

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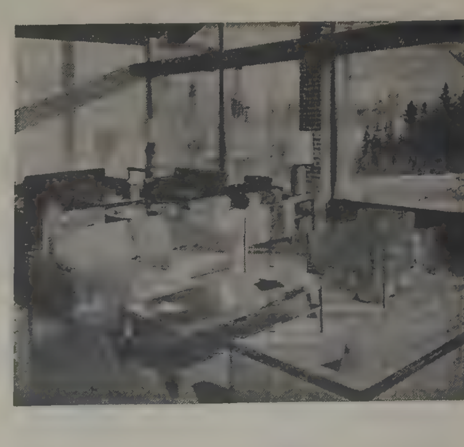
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City major meat packing centre

Edmonton has one of the biggest packing operations in North America and is a premier cattle and hog producer.

To give you an idea, the packing industry alone employs about 3,000 people, some 2,500 men and 500 women. Salaries and wages were over $20,000,000, and costs of materials and supplies were over $150,000,000 in 1969.

Edmonton's 11 packing plants. fuel and electricity bills were around $610,000.

The 11 plants range from "A" to "V". That is, Alsask Processors, to Victoria Fancy Sausage.

Others are Canada Packers Ltd., Burns Foods Ltd., Capital Packers Ltd., Central Alberta Meat Co. Ltd., Edmonton Rendering Co. Ltd., Gainer, Chester D., Gainers Limited, Ouellette Packers Ltd. and Swift Canadian Co. Ltd.

The $193,600,000 total value of processed meat is more impressive when you realize that each dollar is believed by economists to turn over three or four times in added business to Edmonton.

Edmonton's meat processing industry got a further thrust last month when the F. G. Bradley Co. Ltd. came to town, dragging a husky $1.5 specialty steak processing business with them.

The firm, which located in Toronto, plans to move to Edmonton to be closer to its source of supply — beef. There will be a $250,000 a year payroll and jobs for 25 "important people," according to Ken Woodward, 27, western regional manager who himself is a professional butcher.

The Bradley company move also will have ramifications for Northern Alberta's feedlot industry and for luxury hotels all over the West. Emphasis will be placed on heavier, feedlot fed cattle, according to Mr. Woodward. In addition, the company will be paying skilled butchers $150 a week plus over-time to take the bones out of the prime carcasses, trim excess fat and age the steaks for luxury hotels in vacuum-packed plastic bags.

CUT COSTS

Alberta's hotelmen also will get a boost since the move of the Bradley firm from Toronto to Edmonton will save a 4,000 mile rail bill on the prime beef. Previously, the Bradley firm took beef from Montreal slaughterhouses or did their own slaughtering in Toronto, then shipped steaks out to the luxury hotels in the West.

The firm ships Alberta beef to resort areas in the United States, the Caribbean area and Switzerland. There is an outside chance the firm will try to wedge its way into the Japanese market, helped by city and federal agencies.

The Bradley company eventually will build its own plant, likely in two years, and will hopefully be churning out $8 millions worth of prime beef cuts in five years. The former Toronto firm right now is operating on the leased premises of the Redi-Food and Freezer company on Whyte Avenue on 106th Street.

The firm's operations, of course, will put pressure on Edmonton's packing houses to supply the loin and rib of choice carcasses. This demand will back up to the farmer who will have a market for heavier, better beef. And the combined pay packet of the Bradley company, the beef packers, the feedlot operators and the luxury hotels will in turn mean much more business in Edmonton.

A supplement to Edmonton's beef business was the Jan. 17 opening of Burns Foods Limited $500,000 feed plant here. The highly-automated plant will add little immediately to wages since it will take only three men on an eight-hour shift to turn out 25,000 tons of feed.

The president of Burns, A. J. E. (Art) Childs, of Calgary, said the plant "represents an important addition to our feed manufacturing capacity." The plant "underlines our faith in Alberta's livestock industry."

The Burns company — economically on the ropes several years ago — has come bouncing back with a $4,000,000 investment planned for 1970. The firm also made a $4,000,000 investment in 1969.

What the new feed plant will mean is possibly cheaper and hopefully better feed for northern Alberta stockmen. This will mean higher net returns for stockmen, which should encourage more beef production. There will be, then, more beef to process by Edmonton plants.

This will, of course, back up into Edmonton's business community in the form of new suits and dresses for farm and agri-business people, a trip to the Citadel and maybe a week in town during Klondike Days. Hotels, restaurants and other service industries have got to benefit.

Swine outlook good to mid-year

Although the short-term outlook is favorable for swine there could be over-production and depressed prices "starting about the middle of 1970" and continuing into 1971.

According to Art Reddon, swine specialist, Alberta department of agriculture:

"There is no doubt that currently from a short-term point of view, hog production is an attractive proposition. The surplus grain situation coupled with a demand market has created the present favorable conditions. However, this situation could change rapidly if too many farmers decided to raise hogs."

In 1969 in Canada 47,000 more sows than in 1968 were held back from slaughter with one third in Alberta. In addition, there were 9,500 fewer stags slaughtered in 1969 than 1968.

If an average of 10 to 12 pigs is marketed per sow held back, this means an increase of about 500,000 pigs "from this source alone," Mr. Reddon said.

The holding back from slaughter of these sows and boars could lead to over-production in the future and a sharp decrease in swine prices.

Production is not affected any large extent by large producers, the Alberta swine specialist said. It is more affected by "slight adjustments in production" by many small producers.

In 1966, the Dominion Bureau of Statistics reported that about 154,000 Canadian farmers had pigs. About 28,000 of there were in Alberta. But in all Canada, only 560 farmers were large producers —sending 1,000 pigs or more to market. The 1966 figures show 104 big producers in Alberta.

"If each farm increased its output by 10 pigs—that's two-thirds of one sow's offspring in a year—the over-all pork supply in Canada could increase 20 per cent," Mr. Reddon said.

Mr. Reddon said the increase might not be as high as visualized because fewer Canadian farms are raising pigs.

In addition, greater production of pigs might be partially absorbed by the United States. A strong future market for pigs is reported there. Besides, Mr. Reddon said, a market for Alberta pigs might be developed in the northwest and western United States and Japan.

Turning to the short-term hog outlook, hogs are up six per cent on farms with "virtually all the increase in Western Canada."

More cattle on feed in '70

There will be more cattle on feed in Canada in 1970 than last year according to Dr. R. G. Marshall.

Dr. Marshal, livestock marketing economist, University of Guelph, says there has been a decline in calf slaughter and exports of feeder cattle to the U.S. are down. This increase in feeder cattle inventory outweighs the decline in beef cattle inventories over past years. In addition, the hold back of heifers has exceeded requirements of the breeding herd.

Dr. Marshall concludes enough cattle will be coming from Canadian feedlots to keep prices close to the present export price for much of the year.

PRICES HIGHER

He noted that feeder cattle prices in Canada have been $4 to $6 higher than prices a year ago. These price increases may continue through the early months of 1970 because "of the competition which prevails for the available supply of feeder cattle."

Most of the country's increased placements of cattle on feed has occurred in Western Canada.

"Eastern feeders are reaching into local supplies to a greater extent as indicated by a small decline in calf slaughter." There would "appear to be fewer cattle on feed in Eastern Canada."

LESS PROFIT

Dr. Marshall said profit margins will probably be narrower than in 1969.

"This is based on the conclusion that United States fed cattle prices will be about the Canadian export equivalent and will not show much improvement over average prices the past year." Further, U.S. cattle prices have been $4-$6 or more above a year ago levels.

"At this time, however, it is difficult to visualize fed cattle prices in Canada in (1970) averaging out any higher than in the year just past nor does it appear that feeder cattle prices will return to year ago levels."

Dr. Marshall also said that "feedlot returns in the coming year could also be below the level that cattle feeders have experienced in most recent years." In fact, Canadian margins will likely be lower than American.

"In Western Canada, a partly compensating factor for many cattle feeders is access to distress grain with dismal alternative marketing opportunities." In both Eastern and Western Canada, the high cost of borrowing will cut deeply into cattle returns. Farmers who have not made wise decisions when starting feedlot operations could go broke.

The livestock economist said that "price changes in the past few months have tended to shift relative returns within the beef industry in favor of the cow-calf sector of the industry." The forces within the feeder movement have made it more competitive in recent months and this "is not likely to diminish" as cattlemen move into 1970. "Higher feeder cattle prices will undoubtedly stimulate interest in feeder cattle production."

Higher cattle prices may well stimulate producers to sell animals at heavier rather than lighter weights. "The decline in calf slaughter over past months indicates that this alternative has been attractive to producers in both Western and Eastern Canada."

However, the indicated increase of 13 to 14 per cent (or 150,000) in choice and good western cattle will make only a small dent in the western grain surplus. "It would require something less than 15 million bushels of barley," he said.

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Barley future 'uncertain'

The outlook for feed grains in the current year is relatively better than the wheat outlook.

Perhaps the biggest question mark is barley, which could run into competition from low-quality wheat as feed. Government experts have issued well-hedged suggestions that there will be a higher demand for feed grains, but anticipated increases in production will probably more than cover the requirements.

LEVELLED OFF

International trade in feed grains in the last two or three years prior to 1969-70 levelled off at about 44 million tons.

This was largely because so much wheat had been used as a feed grain, primarily in Western Europe, according to J. S. Carmichael, economics branch, Canada department of agriculture, Ottawa. Feed grains in Western Europe, he said, declined by 3.5 million tons in 1968-69.

Japan, the world's largest importing country, took 95 per cent of its barley from France and Australia in 1968-69. But the year before, 84 per cent had come from the United States and Canada.

With increased supplies, prices of barley and oats on world markets, fell during 1968-69, Mr. Carmichael said.

PRODUCTION UP

Production of barley, oats and corn in Canada in crop year 1969-70, is forecast at 17.6 million tons and, if mixed grain is included, 19.4 million tons. This is eight per cent higher than 1968 and 28 per cent higher than the recent average.

Main increases in barley and oats occurred in Saskatchewan and Alberta with a total increase over 1968-69 of more than two million tons. The main increase was in barley production.

With barley stocks in Canada of 7.1 million tons to start the year, available feed grain supplies are 28.5 million tons. With slightly more livestock and more grain per livestock unit, feed grain consumption by livestock in 1969-70 is forecast at 16.5 million tons, up nearly five per cent from 1968-69

HIGHER CONSUMPTION

"Forecasting a further increase in the number of grain consuming animal units from 17 million to 18 million in 1970-71, total feed grain consumed should be up to 17.8 million tons," Mr. Carmichael said.

"The increase in 1971-72 will probably be smaller. Prices of oats and barley which fell in 1968-69 can be expected to remain low. For 1969-70, however, corn prices should remain above last year's low levels."

Mr. Carmichael said that exports of barley which constitute about all feed grain exports are expected to reach higher levels in crop year 1969-70 than in recent years. But some may be priced quite low. "While exports will be higher this year, it is doubtful whether they will be as high in 1970-71 or 1971-72."

BIG CARRY-OVER

"At the end of next July, we appear headed for carry-over of about 9.2 million tons, almost 30 per cent higher than in July 31, 1969." This is double the carry-over of July 31, 1968.

"The situation for 1970-71 can be summed up simply: we might use 1.4 million tons more of feed grains than in 1969-70, but the same acreage as this year would likely produce 2.1 million more tons than used in 1969-70. Furthermore, the chances of equal exports in 1970-71 seem remote.

"Among the feed grains, oats has been declining and barley and corn advanced relatively in feed grain utilization." Corn is steadily being grown more and more in Ontario and Quebec and likely will continue to be used more and more.

CUT PROUCTION

"It would appear," Mr. Carmichael said, "that some reduction from current levels of oats from 7.7 to 6.5 million acres would provide sufficient supplies for 1970-71 and 1971-72. With barley, an acreage reduced from 9.5 million acres would be sufficient for 1970-71, but prospects for 1971-72 indicate an acreage might rise to 10 million."

Mr. Carmichael said that "the ability to produce feed grains in Canada at prices competitive with U.S. corn is essential for the expansion of feed grain exports." It is also essential for the further growth of the Canadian Livestock industry, especially for export.

BEST DECISION

Discussing the outlook for feed grains, W. J. Craddock, economist at the University of Manitoba, said that given other alternatives, an expanded acreage of feed grain may be the best decision at this time. "Except for perhaps small increases in forage acreage, all the land used in grain production in 1969 will be available and used in 1970," Prof. Craddock said.

Despite large inventories, he said much wheat will be seeded this year. But if 20 million acres of wheat is seeded, as seems likely, and crops similiar to 1961 were to occur, the wheat inventory would still be over 400 million bushels. "This would be some 220 million bushels greater than is defined as a normal inventory by the Temporary Reserves Act.

"Hence, it would appear that even if extremely favorable wheat markets develop over the next year and a half, and even if very poor growing conditions are experienced, 20 million acres of wheat in 1970-71 would be more than adequate to maintain inventories at a reasonable level.

HUGE SURPLUS

"On the other hand, if wheat exports are 300 million bushels in each of 1969-70 and 1970-71, and if the average yields of the past decade are realized, 20 million acres of wheat could leave us with wheat stocks of one billion bushels at the close of the 1970-71 crop year.

"A reduction of five million acres seeded to wheat would necessitate increases in either oilseeds, feed grains, summerfallow or a combination of all these. It is highly unlikely that summerfallow will take up much of this slack."

If 19.4 million acres of wheat are seeded and 32.1 million summerfallowed, the prairies acreage of feed grains or oilseeds must absorb about 1.7 million more acres.

SYMBOL OF ABUNDANCE
. . . is cause of deep concern

The 1969 outlook indicates that flaxseed should decline over 400,000 acres next year while the rapeseed acreage could remain the same as in 1969-70. The acreages of oats, rye and the minor crops are estimated at levels near their 1969-70 acreage.

BOOST BARLEY

The net effect is that barley acreage in the prairies must increase by 2.7 million acres to 11.7 million acres in 1970-71.

On the basis of the average yields of the past decade these acreages would produce 20.3 million tons of feed grain in 1970-71. The outlook suggests that domestic livestock feed grain demands will increase to about 15.3 million tons next year, with industrial and seed requirements at about two million tons. If domestic demands were no greater than the above estimates, then feed grain exports would have to be greater than three million tons (the equivalent of 125 million bushels of barley) to prevent seed grain stocks from accumulating.

BIG VARIATION

"To summarize, with feed grain acreage about equal to that of last year, except for 2.7 million acres more barley in the prairies, total feed grain could vary between 13 million and 22.6 million tons, depending on whether very poor or very favorable growing conditions were to materialize.

"With feed grain demands equal to 18 to 19 million tons depending on the level of feed grain exports, imports and domestic use, stocks could either decrease five to six million tons or increase three to four million tons over 1969-70 year end levels depending on whether very poor or very favorable growing conditions were to materialize.

"In the event that growing conditions were adverse and there were strong export demands, Canada's feed grain supplies could diminish considerably. Projected year-end stocks are only about 60 per cent of annual feed grain disposition. With average yields, a two to three million acre increase in feed grains could result in a further build up of stocks unless exports were expanded to near 100 million bushels per year."

Stores may soon sell 'meat' made from Alberta rapeseed

Lunch meats for economy-minded people — made from rapeseed grown in Alberta — will not likely be manufactured in 1970.

But there is a good possibility this will come to pass in the next five years.

And western oilseeds may become a source of food-grade protein if research at the University of Saskatchewan is a success.

A new cash crop for western Canadians — field peas — is also looming on the horizon. These peas could be fed as a protein supplement to pigs which in turn could be sold to Japan and the northwest United States.

All kinds of new crops are looming on the horizon, thanks to research at the three prairie universities and the research stations of the Canada department of agriculture.

Take soybeans for lunch meat. Two Alberta food scientists, Dr. Harold Jackson, associate professor of food science, U of A, and David Schroder, a graduate student, made a cheap lunch meat from soybeans. Mr. Schroder has gone to the United States, but Dr. Jackson is busy trying to duplicate the feat using rapeseed.

The cheap lunch meat — which could cost 25 to 30 cents in retail stores — might well provide a cheap source of protein for poorer Canadian families. Perhaps it could be exported to other countries, especially where incomes are low and protein intake is low too.

This University of Alberta discovery will likely mean a larger rapeseed acreage here when Dr. Jackson perfects the process. Apart from anything else, the discovery should make a new industry for Alberta.

An Alberta farm boy, Dr. J. M. (Milt) Bell has found at the University of Saskatchewan that field peas of cull quality make an effective and profitable replacement for fishmeal and soybean meal. All are protein sources for grain-fed pigs, but the last two are imported and the field peas can be home grown.

A graduate of the University of Alberta, Dr. Bell has won international acclaim as an animal nutritionist. He said that production factors will determine whether peas will ever be used in significant quantities as a protein supplement. Alberta and Saskatchewan alone could produce over two million bushels of peas just to feed present pig populations.

NEW PROTEIN SOURCE

Rapeseed, sunflower and flax — all crops that are grown or could be grown in Alberta — might someday provide protein for humans.

There are blocks in front of turning rapeseed and flax into human protein food, however. These crops contain high fibre contents and even some toxic contents so further refining will be required to produce a palatable and attractive food.

Calgary sorting yard costs CP $14 million

CP Rail is building a $14,000,000 freight car sorting yard in Calgary to handle growing freight transportation needs.

The system will be controlled by a digital computer, aided by giant retarders, electronic scales, centralized traffic control, radar, radio and television.

The yard is to be operational in 1971. It will be capable of processing 3,000 cars a day which is double the present capacity.

Studies indicate the railway will be handling 80 per cent more freight cars in and out of Calgary by 1980. This represents an increase equal to 13,000 new revenue freight cars per year, each year.

Most dramatic growth is expected in bulk commodities suited to unit train operations and the yard has been designed for these trains as well as regular freight trains.

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The CN symbol is seen on both the Pacific and Atlantic Coasts—the Alaska cruise ship, S.S. Prince George, is the pride of the Pacific Coast, and vessels of CN marine services link Prince Edward Island and Newfoundland with the mainland. We also operate a brand new, modern highway coach service in Newfoundland.

But CN does much more than move products and people. CN is also in the telecommunications business with a computer system which switches 90,000 messages a day, and provides telephone service in northern British Columbia, the Yukon, Arctic Islands and in most of Newfoundland.

CN owns swinging hotels from Vancouver on the west coast to St. John's on the east coast.

Canadian National's urban development group is constantly helping in transforming of outmoded downtown areas into lively city centres; Edmonton is one prime example but there are other examples in such urban centres as Saskatoon, Montreal and Moncton. CN's industrial development and plant location services are designed to facilitate new resource and industrial developments and assist industrialists in finding the right location for new industrial projects.

A transportation and communications organization with many facets but with one thing in common—one aim: to help Canada grow and Canadians to go places.

Canadian National does much more than it's famous for.

Beef future bright

The same market for slaughter and stocker steers is expected in 1970 as last year, but the future by 1973-74 looks bright, says B. R. Triscott.

In the past three to four years, a considerable amount of female cattle have been slaughtered, the managing director of Western Stockyards Ltd., Edmonton, says.

Mr. Triscott said there is a move to build up feeder cattle, especially by the smaller operators using grain. Cattle are the only cash crop of any significance that Alberta farmers have.

FUTURE BRIGHT

Henry Winkler, manager of the Alberta Livestock Co-operative, Edmonton, said he could see "nothing, but good" for northern Alberta's livestock industry. He based his conclusions on three factors:

(1) "Our people can feed livestock as cheaply as anyone."

(2) There is an abundance of cheap feed.

(3) Human population is expanding faster than the livestock population. "If things move along normally by 1973-74, we should hit a peak."

The housewife wants a lighter carcass, Mr. Triscott pointed out. There is a greater demand for beef, but this is subject to many factors. "Our market — especially in the East — may possibly meet the competition from beef from the central states." The U.S. price keeps Canadian prices in line. They are currently in Canada about $32 per hundredweight. "We're tied to the U.S. beef economy."

TAKES TIME

"My personal opinion," Mr. Triscott said, "is that central and northern Alberta is one of the biggest cattle producing markets in Canada." He said he does not expect a big increase in the market immediately as it takes two to three years to get a (finished) steer from a cow.

"Beginning in 1973-74, in my opinion, (there will be) much more cattle grown in central and northern Alberta."

Mr. Triscott admitted that over-production will bring prices down. But it might be possible do do as well, income-wise, if growers are fairly efficient in production and have access to cheap grain

EDMONTON PUBLIC LIVESTOCK YARDS
. . . this is where the cattle prices are set

City livestock industry booming

Edmonton's livestock industry operation is the biggest in the grain and cattle empire of the Canadian West.

The combined estimated value of receipts at the Edmonton public stockyards and direct to packing plants was $193,600,000 up 6 per cent over 1968 — a record high.

The estimated value of livestock that passed through the Edmonton stockyards was also a high — $79.4 million, up 16.3 per cent and also a record high.

The 1969 Edmonton livestock market report said cattle and calve sales were the second highest in Canada at 344,845 head.

But cattle and calf volume was 3.9 per cent. Cattle sales were down five per cent with calf sales down 1.1 per cent. Hog sales at 87,512 were down 1.9 per cent over last year and sheep and lambs totalled 22,933, down 7.8 per cent below last year.

PRICES UP

Average per hundredweight prices on all classes and grades were up sharply from 1968. All slaughter classes sold at $2 to $3 per hundredweight above 1969 levels. Feeder cattle sold $4 to $5 per hundredweight higher. Stock calves showed the greatest price increases at $7 to $9 per hundredweight above 1968.

The Edmonton Stockyard is second only to Toronto, in Canada, a city with at least five times the population. But this should not be surprising as Alberta produces a major share of red meats of Canada

And the beef production business is going to set bigger and better than ever.

This is because Western Canadian farmers are keeping cows and more bulls at home to build up herds. This is the way more and more mixed farmers are responding to the West's wheat crisis, according to John Pankratz, who recently resigned as head of the economics division of the Alberta department of agriculture.

DOWN 3 PER CENT

Total Canadian cattle slaughterings fell three per cent in 1969 because of this tendency to keep the cows at home, Mr. Pankratz said The decrease of cows slaughtered was 5.7 per cent in the West, but up 1.8 per cent in the East.

The beef industry is picking up and grain sales look better too, according to the Canadian Wheat Board.

This effect, hopefully, will be felt in the West in 1970, just when the East begins to feel the pinch of the wheat crisis of 1969.

Why is the outlook for Edmonton's livestock business so good?

All studies show that North Americans like beef. that's all. Mr. Pankratz said that since the 1920s, per capita consumption of beef has been increasing. That's because everyone on this continent has more cash in their pockets. Frequently, they spend it on a steak.

"In 1926," Mr. Pankratz said, "Canadians ate 58 pounds of beef per capita." That was in the so-called "roaring twenties," — the period of "boob-boob-adoo." In the equallyexhuberant 1920s . . . "the consumption is 89 pounds per person. It is estimated that by 1980, consumption will reach 100 pounds per person per year."

A recent study by the United States department of agriculture shows the same story. When people get richer, they eat more beef. This study shows that the consumption of beef has increased 97 per cent as fast as disposable income. In other words, when income goes up one per cent, beef consumption goes up almost as much

Mr. Pankratz suggested that lighter cattle be raised by Alberta producers instead of heavier ones. There is a preferential demand (among consumers) for the 950 - 1,050 pound animal. When animals are fed to the heavier weights, the market price is discounted.

Mr. Pankratz said that "the reason for the lighter carcass is that the 550 pound to 580 pound carcass cuts into roasts and steaks of suitable size for the average Canadian family of 3.9 persons."

The big roasts, apparently, are eaten over several days and families don't like doing that anymore. But the restaurant trade wants bigger carcasses and "it appears there will be a greater demand for the large carcasses (from this source) in the future."

GOOD EATING

Young beef, dark meat and steaks from bulls should not be overlooked by the housewife, packer or meat market manager. Research has shown that these meats make tender and economical eating, according to Dr. Howard Fredeen, animal geneticist at Lacombe research station.

Dr. Fredeen, who developed the Lacombe hog, stressed that "tenderness" is the most essential quality in beef. Dr. Fredeen, admits that it is often difficult for the grocer to sell dark meat. But he has a suggestion. Increase the price five cents a pound and make it "a prestige item."

The Lacombe geneticist said that youghtful beef is tender beef and should be graded "A". And bulls tend to be more juicy and tender than steers or cows, he says, based on research.

Pipe sales likely to pass $1 billion

In excess of $1,000,000,000 worth of large diameter steel pipe will probably be buried in the northwest corner of this continent during the 1970s.

Projects which would require that amount of pipe are already being considered and exploration in the North is only now getting into high gear.

Barring any major shift in United States' policy for satisfying its markets, th is amount of steel will likely be required for the transportation of oil and natural gas alone.

FAR SHORT

If solids pipelines become a reality on a large scale, a billion dollars would fall far short of construction requirements. Cascade Pipe Line Ltd., a Canadian Pacific subsidiary, by 1972 plans to start a $200,000,000 line to move coal from the East Kootenay area to the Roberts Bank deepsea port.

The fantastic potential could greatly expand an Alberta steel industry. The Steel Company of Canada Limited began the production of 42-inch submerged arc-welded steel line pipe in 1969.

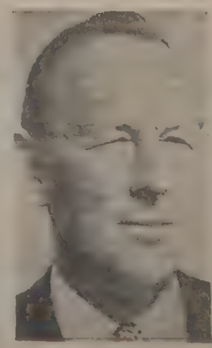
Expansion of this facility or a new plant in Alberta might be part of Stelco's plans. R. H. Macdonald, head of Stelco's western division, says careful consideration is being given to a number of alternatives. Plans may be announced by March.

WILL PARTICIPATE

"We as a company expect to participate in this great pipeline growth," he said. He added that the company could increase its production in the West, but no decision on location had been made.

Dr. Hu Harries, board chairman and chief executive officer of Canadian Phoenix Steel and Pipe Limited, says his company could very well undergo an expansion worth from $10,000,000 to $60,000,000.

Canadian Phoenix is a subsidiary of the Thyssen Group of Germany. It has been negotiating with the Fuji Steel and Iron Co: Ltd., of Tokyo.



DR. HU HARRIES

"We hold the leadership in pipe manufacturing and are not about to lose it now," Dr. Harries said. "We will be meeting with the Japanese in early February."

Dr. Harries said that probably in excess of $1,000,000,000 worth of pipe could be marketed in the Northwest in the next decade.

"We sold about $40,000,000 worth of pipe alone last year," he said. "There is no question that these lines will be built. It is only a matter of time."

NORTH LINE

People in the pipeline industry say a natural gas pipe line along the Mackenzie Valley to Edmonton is almost certain. A 48-inch crude oil line of some 1,600 miles following a similar route is also possible.

Projects of this nature fall into the $1,000,000,000 to $1,500,000,000 category, although labor, construction, and transportation costs are greater than the actual price of the pipe.

The Trans-Alaskan Pipeline System, of some 800 miles, could be built from Prudhoe Bay to Valdez on the southern coast of Alaska.

Gas reserves already located in the Yukon are expected to feed American markets. This will involve either extending the West Coast Transmission Company Limited or making a connection with the Alberta Gas Trunk Line Ltd.

Oil and gas discoveries on the Arctic Islands will also require some pipeline work which might even involve lines running under the Arctic Ocean.

"Security in periods of international difficulty should be of paramount importance in establishing a continental policy for a supply of crude oil and natural gas," says Dick Meeres, vice-president of Banister Construction (1963) Ltd.

"The safety and ease of maintaining and repairing a pipeline compared to transportation by tankers could, therefore, be a major consideration in support of pipeline facilities across Canada to supply future markets both in Canada and in the U.S.A."

In the immediate future, the American and Canadian governments must decide if a line planned by Consolidated Natural Gas Ltd. from Alberta to North Branch, Minn. is feasible. This would include several hundred miles of new pipe and additions to the Alberta Gas Trunk System

Trans-Canada Pipe Lines Ltd. is seeking bids from contractors on 180 miles of additional line to be constructed in the coming year.

Mr. Meeres anticipates that construcion of 48-inch diameter pipelines in Canada could be so extensive within a few years that Canadian pipe mills will be hard pressed to meet the demand even with extensive expansion of present facilities.

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Changing oil, gas patterns in prospect for new decade

The 1970s will be a decade of changing oil and gas supply patterns, air pollution controls and greatly expanded use of hydrocarbons for petrochemical production.

And oil policy in Alberta will have to be harmonized with developments throughout the rest of the world.

GOOD POTENTIAL

The recently announced oil discovery of Imperial Oil Enterprises Ltd. on a peninsula 30 miles northeast of Tuktoyaktuk east of the Mackenzie River Delta, may be an indication of things to come from the exploration programs being conducted in the Canadian Arctic. But a lot of work remains before a commercial discovery is confirmed. Being commercial in that latitude involves having a production capacity of 2,500 barrels per day minimum with recoverable reserves of five billion barrels to back it up.

Alberta's conventional oil reserves appear to have peaked and to have started on an uneven decline. There will probably be small discoveries made but the likelihood of a major discovery is too small to attract a large scale exploration program by the industry as a whole. Production potential, estimated at 1,700,000 barrels per day has yet to be tested but indications are that the United States market demand along with Canadian requirements, will be up to that level by 1975.

CRASH DEVELOPMENT

Meanwhile a crash oil sand development program will be undertaken to boost oil sand production. Syncrude, by that time will be a year away from the start-up of its first plant. A lack of skilled labor, will have delayed construction of a second plant.

Great Canadian Oil Sands is expected to start a second plant rather than make any additions to the present one.

Prior commitments to buy the oil will help greatly with financing the projects. If the reserves of light crude in the Canadian Arctic prove large enough it will also help the project gain acceptance.

FIRST TANKER

The first tanker loaded with Prudhoe Bay oil from the terminal at Valdez will arrive in Los Angeles in 1972.

The committee studying the feasibility of an oil pipeline from Prudhoe Bay up the Mackenzie Valley will probably decide it would be uneconomic at the present time. It will point out that the Midwest is still a free market and that the Alaskan oil could not compete in the area if an adequate well head price is to be paid. Instead a study will be made of the cost of a pipeline from Atkinson Point to Valdez.

It will be decided to replace the Manhatten-type tankers with tankers having a double hull to bring the first crude oil cargo through the Northwest Passage.

Development of the North Sea as the world's largest single source of natural gas and the Prudhoe Bay discovery reshaped the world energy picture in the 1960s.

Major oil and gas discoveries in Australia, Indonesia, Algeria, Libya, Ecuador, Columbia, Nigeria and Portugese Cabinda lessened the emphasis on the Middle East as the world oil centre.

The opening of the Great Canadian Oil Sands plant and the start of oil production from that source, albeit painfully, has demonstrated the feasibility of oil sands production. The granting of a permit to Syncrude Canada Limited to erect a plant to start production in the 1970s has emphasized the importance of the role the sands may be expected to play in future decades.

CHANGED RADICALLY

The world oil supply picture has been changed radically by development of super-tankers to move oil. One hundred of these new vessels are in service and another 200 are on order. They, along with the new discoveries, promise to change the oil supply patterns, and to greatly reduce emphasis on the Middle East as an energy storehouse.

North America faces a radical rearrangement of its supply pattern. Reduced production from the old established fields in the states south of the Canadian border has shifted emphasis to the importance of the shut-in production potential of Alberta's conventional oil, the huge production potential of the oil sands, and the unknown potential of Prudhoe Bay.

MAIN FUEL

Natural gas will continue to be the principle domestic and commercial fuel. Its use as an industrial fuel will be curtailed by the price.

In 1969 a market for unlimited amounts of gas opened up in the United States. This sudden development caught the industry by surprise. It came when the industry was entering a period of oversupply of sulphur and consequent reduced prices on new contracts. It also came at a period of province-wide expansion of the gas industry. Expansion to include fields in the Marten Hills and in the Grande Prairie area for gas export was under way.

The expansion represented a step when gas from these fields was no longer beyond economic reach due to a gradual price escalation. It also brought gas past the doors of more new Alberta residents who can now use this cheap, convenient fuel.

NEW MARKET

The opening of this new market for Alberta gas brought a new entry into the gas export business in Northern Natural Gas Company, an American firm from Nebraska. They came with an aggressive policy which resulted in bids as much as 50 per cent higher for gas. Alberta gas is becoming difficult to find. Most exploration is being conducted in the narrow belt along the eastern edge of the foothills where a discovery was made in the Strachan area in 1967. Subsequent drilling has greatly extended the field and has added a major reservoir to Alberta's reserves.

As this is the only reservoir found in that period it creates some concern regarding the number and extent of further discoveries. The most likely area for further discoveries is the foothills north of Jasper Park and southwest from Grande Prairie. Gas reserves which have been discovered and remain untapped are in the northwest corner of the province. They consist of solution and gas cap gas in the Rainbow and Zama fields and several discoveries in the vicinity of Bistcho Lake.

The use of this gas is probably tied to the extension of the pipeline facilties into the Northwest Territories or Yukon to take gas from discoveries to the American market. This should happen early in the 1970s, or as soon as the industry realizes and accepts that Alberta's gas has physical limitations.

Most gas contracts are for periods of 25 years. The permits granted in 1969 by the Oil and Gas Conservation Board will normally run to 1994, if they are approved by the National Energy Board. The NEB also has reservations about the extent of Alberta gas and reservations about the price quoted in these contracts. There is fear that it will impose restric- gas in Central Canada.
tions on the sale of Alberta

GREAT CANADIAN OIL SANDS LTD. PLANT
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Oil sands finally part of economy

The oil sands are finally integrated into Canada's economy after 100 years of defying science and economics.

Whether private capital has opened a treasure trove or a Pandora's box will depend largely on the federal government's response to a brief being presented to them by Syncrude Canada Ltd. The brief concerns effects of the changes in the taxation structure proposed in the White Paper tabled in the House of Commons in late November.

Two development permits have been issued. One was issued to Great Canadian Oil Sands Ltd. in 1963 to produce 45,000 barrels of synthetic crude a day. The plant was officially opened in September 1967, but has so far failed to produce at capacity for 12 consecutive months. Difficulties have been experienced with equipment failures and with underdesign of the plant's mine installation.

The power deficiency which showed in the winter months, has been corrected by the addition of more [illegible]. A second conveyor system between the mine and the separation plant has recently been installed. Equipment failures persist in the refining and coking sections of the plant.

After hearings which extended over two years Syncrude finally was rewarded with a permit in September, 1969 to produce 50,000 barrels a day of synthetic crude oil, 25,000 barrels a day of specialty oils and 5,000 barrels a day of naphtha.

The plants' design will differ from GCOS in several important areas. Syncrude has not decided on a mining method but will probably use some alternate method to the giant mining wheels selected by GCOS for their operation. GCOS uses a conventional cracking and coking process for processing the separated oil. Syncrude proposes to use a more complex method called hydrovisbreaking, a method of hydrogenating the cracked molecules.

The advantage of Syncrude's method is that the output can be varied to meet the customer's specifications.

Syncrude agreed to a delayed start-up of the plant until 1976 with the first year's full production set for 1977.

Subsequent tax proposals threaten to upset the plan.

If the government changes its taxation plan and foreign investment in Canada continues to be profitable, Syncrude will be free to plan, not only for the current development, but for plants two and three down the road.

But if the White Paper proposals are pushed through, Alberta could lose the $300,000,000 in construction of the first project potential tax income royalty income and all the other potential benefits tied to the oil sands development.

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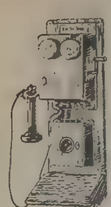
1904  When the system was purchased in 1904 there were 500 Phones **500**

1958  54 years later we past 100,000 **100,000**

1969  Our accelerated growth brought us to 200,000 11 years later. **200,000**

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Chemical industry in sands

Oil sand development means more than just more oil for export.

Actually oil sand development will open a cornucopia of chemicals for development. Products ranging from mothballs to Terylene are available with a few less steps than would ordinarily be the case.

These special qualities of synthetic crude from Athabasca relate to the type of molecule of which the oil is composed. Most crude oils are composed of hydrocarbon molecules in which the carbon atoms form chains. Such oils are grouped as paraffinic or asphaltic.

The oil from Athabasca has the carbon atoms in a molecule arranged in a closed ring. The oil is classed as naphthenic and as such has a number of important chemical qualities.

EASILY CONVERTED

The most important of these qualities is the ease with which it can be converted to that important group of chemicals known as aromatics from which a very long list of industrial chemicals is derived. The most common of this group is benzene. One can, for instance, treat benzene with hydrochloric acid and produce aniline. It probably would be no exaggeration to say that every day a new aniline dye is produced since each new fabric presents a different set of problems for the dye manufacturer.

A new chemical industry based on Athabasca synthetic oil will start in this decade, if not here certainly in the United States.

Export of oil to the United States involves export of chemical feed stock.

One thing we will keep in Alberta is the sand, an excellent source of glass.

GULF OIL REFINERY GOING UP

. . . firm spending $75,000,000 in city

Northern work spurs Alberta

Rapid development of mineral areas surrounding Alberta will spur growth of Alberta's transportation, supply and secondary industries.

This is how the Alberta and Northwest Chamber of Mines, Oils, and Resources sees the 1970s.

Oil will continue as Alberta's major mineral, while increasing development of Alberta's coal industry for expanding world markets will provide a further spur to the economy.

OUTSIDE IMPACT

Alberta's economy might well feel its major impact from mineral development taking place outside provincial boundaries.

Alaska will have some effect, but the impact of the promising development in the Northwest Territories, the Yukon, Northern British Columbia, and Northern Saskatchewan can only be guessed at.

The extent of this Canadian development might be seriously curbed by the federal government's proposed taxation policy. The chamber says the white paper has left the industry unsettled.

SLOW EXPANSION

"The fear raised by the white paper could slow this expansion for the time being," says E. E. Bishop, the 1970 chamber of mines president.

"Generally development in the mining industry is bound to increase as world supplies of metals dwindle, but quick acceleration in the North could be slowed by government measures," Mr. Bishop said.

"The current indicated growth should continue as long as common sense is put into the final white paper," Mike Finland, chamber manager said. "If it goes into force in its present form the mineral industry and the entire economy will be seriously retarded.

NEEN INCENTIVES

"The spectacular development during the last 50 years came about because of incentives in the form of depreciation allowances and tax arrangements."

Alberta's mineral production in 1969 reached a figure of $1,193,000,000 with the majority of this coming from natural gas and oil.

"As 80 per cent of Canada's oil and gas reserves and production are centered in Alberta, projections for the industry in 1970 can appear nothing but optimistic," stated the chamber in its year end review.

Besides further development in the northeast corner of the province and the foothills region in the south, the conventional oil industry is expected to be greatly supplemented by the Alberta Oil Sands.

Alberta's coal industry will be an additional aid. An estimated 12,000,000 tons of coal per year is expected to be shipped from Alberta annually by 1972.

Mr. Bishop says there is some possibility of further development of the uranium mining industry in northeastern Alberta. Currently low uranium prices and the inaccessibility of uranium in the Lake Andrew area have stifled development.

HEAVY DEMANDS

"The impact of exploration outside of Alberta, particularly in the North, could have the greatest effect on Alberta," Mr. Finland said. "Not only will it make further demands on our transportation and supply industries, but it could very likely shift more of Alberta's economy into secondary industries."

In the North mining production has multiplied considerably in the past few years. In 1968 mineral production in the Northwest Territories equalled $150.000.000.

It has been estimated that by 1980 mineral production in the Yukon and N.W.T. combined will exceed $1,000,000,000. Mr. Finland estimates this figure could be achieved as early as the mid-70s.

HIT PEAK

Northern oil exploration in 1970 is expected to hit a peak. The chamber "guestimates" that 75 wells will be drilled in the Far North during 1970. Drilling and exploration costs may run as high as $50,000,000 in 1970.

Commissioner S. M. Hodgson has estimated that an oil reserve the size of Prudhoe Bay will be discovered in the Canadian Arctic. Others have speculated that hte Mackenzie Delta area could hold as much oil as Alaska's North Slope and that reserves in the Arctic Islands would push Canada's North out in front.

If something is developed, Alberta will undoubtedly supply part of the equipment and the transportation system to move into the area.

"It looks like natural gas will be taken from the North by a pipeline to Edmonton, and oil might also come this way," said Mr. Finland.

He suggests that the North might send oil in three directions before the 1980s. Ships could haul oil east from finds on Melville and other islands; the Trans Alaskan Pipeline System could move oil west for Japan and the West Coast of the U.S., and a $1,000,000,000 pipeline could move oil south from Alaska and perhaps the Mackenzie Delta to Edmonton.

From Edmonton this oil could either go to the Eastern United States or be refined in Edmonton and thus increase this city's chemical industry.

SUPPLY CENTRE

Hardrock mining is ever expanding in the territories. This industry uses supplies from Alberta, and a large part of its labor force is recruited by the chamber in Alberta.

Mineral mining expanded by 56.7 per cent in the territories during 1969. Major mining operations are being conducted in 14 major areas in the Northwest Territories and the Yukon.

Mineral production includes silver, lead, zinc, copper, cobalt, bismuth, tungsten, gold, and cadmium.

The British Columbia and Yukon Chamber of Mines estimated mineral production in their area at $460,000,000. Exploration reached a new high with $40,000,000 being spent. An equal amount, at least, is expected to be spent in the coming year.

The B.C. chamber estimates that, "barring the possible introduction of unwise and restrictive legislation," B.C. mineral production will reach $1,000,000,000 by 1980.

The Yukon was expected to exceed $100,000,000 within a few years. Expanding markets in Japan, and developing markets in France, Germany, Belgium, and Sweden are spurring this mining development on the West Coast and in other areas.

SOME SPINOFF

Alberta's proximity to the Interior of British Columbia through the Yellowhead Route could bring Alberta some spinoff from mining development in this region.

Edmonton is already the supply base for Uranium City in northwestern Saskatchewan.

Extensive exploration in 1969 and an improved future for uranium could be a major asset for Alberta.

Revenue up for CN activities

Canadian National Railways in participation with private industries contributed $1,800,000,000 to the Canadian economy in 1969.

Revenue positions improved in all but one activity. Express services were up by 16 per cent, carload freight services increased by six per cent, telecommunications commercial service jumped by eight per cent, and CN operated hotels increased by 10 per cent.

Revenue from passenger services equalled 1968.

Operating costs increased by five per cent, and this will continue in 1970 to include $35,000,000 additional wages.

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Edmonton Power's new Clover Bar Generating Station

Some Electrifying developments to look forward to in the 70's and beyond

- In June of this year the first unit of the new Clover Bar Generating Station goes on line. Three other units will follow before 1980, giving Edmonton Power—Generation and Water Treatment the capability of satisfying the electric power needs of a community of 850,000 persons.
- Walls will be finished with prefabricated electro luminescent panels which light the interior of our houses and allow for interior decoration changes by changing colors through frequency control.
- Home computerization — Allowing people to set appliances in action — observe conditions in the home etc. and with stores allowing home shopping via T.V.
- Built-in air conditioning system for the home.
- with air conditioning provide complete environmental
- and electric barbequing which outdoor living on cool
- New districts or older district rebuilt through urban renewal will have complete underground distribution systems.
- Electric cars and trucks will be in great use — cutting down pollution — Battery charging stations will start to replace gas pumps.
- Built in vacuum systems for home cleaning.
- Power Plant Capacity
  1970 — 580 M.W.
  1975 — 755 M.W
  1980 — 1105 M.W.
- High frequency ovens (Radar ranges) will be commonplace by 1980, allowing homemakers to cook under cool pleasant conditions.

Mining firms hold schedule

Two major coal mining operations in Western Alberta appear to be able to start shipments to Japan on schedule

The multimillion dollar plant, 24 miles south of Hinton, being erected for Cardinal River Coals Ltd., is scheduled to start operating early this month

Peter Cullimore, president of Luscar Ltd., which is a partner in Cardinal River, said plant construction is "reasonably on schedule" and the company should be able to start producing coal in the spring.

Cardinal River has 1,000,000 ton a year contract for 15 years. First regular shipments are to start in March.

GOOD FUTURE

"I think the future looks very promising," says Mr. Cullimore. "Demands for thermal coal are increasing. The City of Edmonton may eventually need some coal for its utility plant.

"Export coal hinges on finding sufficient reserves. Japan has indicated the need for substantial increases, and the Europeans believe Alberta coal can be competitive in spite of the high transportation costs."

McIntyre Porcupine Mines Limited (coal division) are completing their initial $43,000 000 operation for mining, processing and moving coal at Grande Cache on the Smoky River.

HIT TARGET

"We will certainly hit our [illegible]get date of Aug 1 for [illegible]ng coal on our long-term [illegible]act," L. G. Price, coal [illegible] [illegible] of rail cars will postpone a shipment of raw coal from February until April."

"We expect to move 1,250,000 tons of coal before April 1, 1971 on our long-term contract. We were originally committed to move 1,000,000 tons by this date.'

McIntyre will increase its shipments on its original contract to 2,000,000 tons for the following 14 years. The entire contract now calls for 29,250,000 tons of coal. On top of this the Japanese have the option to purchase an additional 10 per cent

30 MILLION TONS

As the price is advantageous it is expected that Japan will purchase the 10 per cent extra and boost the total sale on the one contract to over 30,000,000 tons of coal by 1985

McIntyre estimates they have 1,400,000,000 tons of coal in reserve

The region has attracted considerable exploration activity on the part of those companies now mining in the area and many additional firms.

JAPANESE LOOKING

Among those to explore the area will be a firm set up by 10 Japanese steelmakers and 11 coal companies. In a December meeting held in Tokyo, Overseas Coking Coal Development Co. was founded with capital assets of $690,000.

When the new firm is set up, plans will get under way, in conjunction with Canadian authorities, for prospecting and development of coal resources in Alberta.

The Japanese government has estimated that 71,300,000 tons of coal will be needed in 1973 and about 60,000,000 would have to be imported.

CARDINAL RIVER COALS OPERATION AT LUSCAR
. . . will ship first coal to Japan shortly

$1 billion coal contract likely

A contract to export an additional billion dollars worth of coal from the Smoky River area to Japan may be signed this summer.

McIntyre Porcupine Mines Limited (Coal Division) expects to be able to offer between 3,500,000 and 5,000,000 tons of coal a year to the Japanese over 15 years in addition to existing contracts.

McIntyre is preparing to move coal for an existing 2,000,000 tons a year contract later this year. This 15-year contract has been valued at $450,000,000.

LARGE RESERVE

"We spent about a million dollars on an exploration study last year," said L G Price, McIntyre's coal division manager.

"The study proved a large reserve of coal lay in the Sheep Creek area," Mr. Price said. "This coal can be removed by strip mining at the rate of 3,500,000 tons a year for over 15 years.

"We are now drilling in the Beaver Dam area seven miles west of Sheep Creek. If this additional drilling is successful, some time in the summer we should be able to offer 3,500,000 to 5,000,000 tons of low volatile coal for sale over and above our existing contract."

TWO DANGERS

Marketing this coal to the Japanese may be another matter. The Japanese have shown willingness to pay current prices for Canadian coal, but if tax and or transportation costs increase the price of coal the sale could die.

"The Japanese want increased tonnage if possible." Mr. Price said. "The Japanese steel industry will pass the United States in production by 1975.

"There is no question about selling this coal if the price is reasonable. We have had seven or eight inquiries from Europe which we can't do anything about."

ASKED HELP

Mr. Price said his company had applied to the provincial government for assistance in keeping rail rates down.

"A rate increase will give the Crowsnest Pass area a great advantage and Alberta will lose sales to British Columbia," he said.

The federal government's decision on the White Paper on Taxation could injure future sales. Mr. Price says coal mining has a low profit margin and needs a tax holiday to get established.

Anti-inflation measures and the resulting high interest rates are also drying up capital which might otherwise come to coal mining.

Increased freight rates could also jeapordize the proposed contract, Mr. Price says. Currently Canadian National Railways is hauling coal over the less mountainous but longer route from Grande Cache to Vancouver at a lower per ton price than that paid by Kaiser Resources Ltd. from Crowsnest Pass. Consideration is being given to increasing the CN rate.

McIntyre would also like to ship coal straight to Prince Rupert. They own harbor property which can be converted to a deep water port capable of handling the super-bulk carrier. There is some concern that CN will charge more to haul to the new port.

WORLD-WIDE AUNT

"If either of these factors cause a significant increase in the price of coal, it could drive the Japanese to other markets," Mr. Price said. "Japan is in the middle of a desperate world-wide search for coal."

Mr. Price said Alberta coal had a better coking quality, but if prices became too high the Japanese would content themselves with cheaper coal from Australia, the U.S., South Africa, and Indonesia.

"The Japanese are seriously looking at Indonesia where labor rate of $8 a month give the industry a great advantage over ours where labor costs $44 a shift."

CAPTURE MARKET

If transportation costs or tax changes do not curb the industry, Alberta will likely take over much of the Japanese market now held by the Eastern United States, Mr. Price says. The U.S. mines

Mr. Price said a new 5,000,000 tons a year contract would expand the Grande Cache operation to 1,000 men by 1973. The plant would perhaps require another $60,000,000 expenditure and the mining operation would need an additional 450 men.

"The operation for the new contract wouldn't reach capacity until 1973," Mr. Price said. "It would certainly ensure a large coal industry until the 1990s."

McIntyre may jump into a third major coal project 50 miles south of Grande Cache before the mid-1970s. Mr. Price says exploration on the Little Berland River has been encouraging and test drilling will continue this year.

"Other mining companies are doing extensive exploration in the Smoky River area," he said. "If taxation and transportation conditions are favorable, I would not be surprised to see between 7,000,000 and 10,000,000 tons of coal moving out of the Smoky River area annually by 1975."

Wheat crops yielded above average in '69

OTTAWA (CP) — Greater use of summerfallow land and a higher average yield contributed to the 665,000,000-bushel 1969 wheat crop, the Dominion Bureau of Statistics reports.

Western farmers sowed 79 per cent of their last year's wheat on summerfallow land and harvested an average 29.1 bushels an acre for a total of 561,500,000 bushels.

The remaining 21 per cent of the seeded acreage was stubble land and yielding an average 20.3 bushels an acre for a total of 103,500,000 bushels, the bureau reported in its first 1970 crop report.

In 1968, farmers averaged 23.7 bushels from summerfallow land which made up 72 per cent of the seeded acreage.

The five-year average, 1963-67, was 76 per cent on summerfallow, yielding 24.8 bushels per acre and 24 per cent on stubble yielding 17.7 bushels.

Saskatchewan farmers sowed 82 per cent on summerfallow for an average yield of 29.4 bushels. The 18 per cent on stubble averaged 20.6 bushels.

Alberta had 74 per cent on summerfallow with an average yield of 28.6 bushels and 26 per cent on stubble, averaging 20.2 bushels.

For other crops the percentages and average yields in 1969 were:

Oats—summerfallow 26 per cent, yield 61.5 bushels; stubble 74 per cent, yield, 45.1 bushels.

Barley—summerfallow 38, yield 48.4; stubble 62, yield 34.1.

Flaxseed — summerfallow 45, yield 15.5; stubble 55, yield 10.2.

Rapeseed — summerfallow 65, yield 20.8; stubble 35, yield 14.1.

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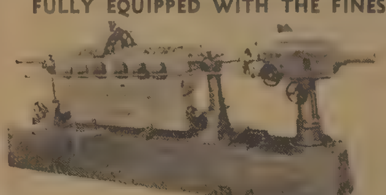

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Coal benefits all Western provinces

Coal in the 1970s for Western Canada means increasingly larger contracts, more mining companies, and possibly new markets.

The extent of this development as well as the reasons behind it are given in a report prepared for The Journal by G. W. Barnes, managing director of the Coal Operators' Association of Western Canada.

"In view of the intense exploration activity now in progress, it seems reasonable to expect that at least two more companies in British Columbia and possibly three in Alberta will attempt to enter the export market within the next several years, adding perhaps another 10,000,000 tons per annum to already contracted exports," Mr. Barnes said.

Mr. Barnes said at present time there are six producing companies with long term Japanese contracts totalling 185,000,000 tons over the next 15 years.

The estimated value of the contracts are $2,250,000,000. Furthermore, two companies have been talking to Japan with regard to producing an additional 60,000,000 more tons and 10 to 12 companies are actively prospecting owned or leased property.

"Such developments will, of course, depend on the establishment of economic reserves of such size, quality and mineability to justify the necessary expenditure for mining and preparation plants, railway spurs to connect with existing transportation facilities, and the provision of housing and other amenities for the working forces," Mr. Barnes said.

"The second consideration is the obtaining of long-term contracts with the Japanese on such terms as to make the project economically viable."

In recent months world demand for metallurgical coal has increased. Rising costs and the instability of supply may be creating new customers.

"During December and January of this year a delegate from France representing an association of French producers and consumers, has been visiting our Western Canadian producers exploring the possibility of exporting metallurgical coal to France."

Mr.Barnes says "there is a very real possibility", that metallurgical coal in large quantities can be exported to Europe.

U.S. MARKET?

He suggests that Canadian coking coal may find a market in San Francisco and other Western steel plants in the United States. The Western United States contains little or no good coking coals. With reduced transportation costs this coal could be exported.

"The north-south movement of metallurgical coal and coke is just now making a start. With imagination and co-operation of all concerned, a market of at least 2,000,000 ton per annum could be possible within the next 10 or 12 years."

Ontario steel mills now obtain their coking coal requirements from the U.S. mines, but this could change.

PROSPECTS BRIGHT

"With the increasing scarcity, instability of supply and rapidly increasing prices of good low volatile, low sulphur coking coals from the U.S. mines, the time is drawing closer when Canadian coals will become attractive to these mills."

The Western coal industry may also sell to the expanding thermal power market. Mr. Barnes says: "Strip mines in Alberta and Saskatchewan produce some of the lowest cost fuel for power production in North America in the order of eight cents to 15 cents per 1,000,000 BTUs delivered at the plant.

"In contrast the average plant costs in the U.S. fo coal and gas are 24 cents and 25 cents per million BTUs."

TRIPLE CONSUMPTION

Alberta and Saskatchewan power plants are expected to triple their consumption of lignite and sub-bituminous coal to 9,000,000 tons annually by 1977.

Mr. Barnes said it's believed that even if atomic power can be developed fast enough to provide half the fuel for power plants by the year 2000, the increased demand for electrical power would require four times the coal that is now being produced.

The Japanese market is the most significant today and its rapid growth gave a new look to the Western Canadian coal industry.

80 MILLION TONS

"In 1973 the Japanese forecast they will produce 80,000,000 tons of steel," Mr. Barnes said.

By 1975 Japan will have to import 45,000,000 tons of coal or 79 per cent of their total requirement. Japan's coal industry has peaked and its coal is of inferior quality.

CP RAIL UNIT TRAIN
. . . hauling sulphur in south

Coal major factor in growth

Coal mining will grow and stimulate the economy of Alberta during the 1970s, says Russ Patrick, minister of mines and minerals.

This year will see the first major shipments of coal exports for Japan leaving from the McIntyre Porcupine Mines Limited (coal division) mine at Grande Cache, the Cardinal River Coals mine at Luscar, and the Kaiser Resources Ltd. operation in the Crowsnest Pass.

"The coal industry means far more to the Alberta economy than the 10 cents a ton royalty paid to the government," Mr. Patrick said.

OTHER BENEFITS

"It has been estimated that coal exports contribute $1.59 a ton through direct revenues to government generated by the coal mining operation."

Mr. Patrick said employment, new industry, and indirect revenues are also important gains from the coal industry.

"There was a time, not so many years ago, that the federal government was willing to pay several dollars a ton to subsidize coal transportation to develop foreign markets," he said.

"Coal has a high labor content compared to oil and it is a continuous operation. Modern mining requires highly educated people like those from NAIT, so we gain further by keeping these people in the province."

BIG BUSINESS

Present coal contracts mean that by 1971-72 Western Canada will be shipping 13,500,000 tons of coal to Japan annually. This coal is worth about $13 a ton when loaded on ship at Vancouver.

This year 7,000,000 tons of coal will be shipped. McIntyre will ship 2,000,000 tons, Cardinal River, 1,000,000 tons, Kaiser Coal, 3,000,000, and the balance will be made up by other Alberta and B.C. firms.

Within 15 years Western Canada's vast coal supply could inject $5,000,000,000 into the Western economy. Existing contracts mean $2,500,000,000 to Alberta and British Columbia by 1984.

START TALKS

"Negotiation will be taking place in a month or so with the Japanese," Mr. Patrick said. "I am confident that this will result in a large contract at least doubling coal sales from Grande Cache.

"I am not sure what the other mines can do as yet for increasing contracts," he added.

"The Japanese are urging negotiations, but they want to know that these companies can meet their deadlines on deliveries."

Mr. Patrick said that a possible Alberta coal market exists in Europe, but the freight costs would be very high.

"We talked of Alberta coal when in Germany and I pointed out the great shipping distance," Mr. Patrick said. "They replied that India is also a long distance away, and they buy coal there now."

Alberta coal would likely go to Vancouver by rail and through the Panama Canal if it were sold to European firms.

Mr. Patrick said the government has been reluctant to open up more areas for leasing to the coal industry, but land would probably be made available as needed.

Canadian coal going to Japan must partially compete with the massive reserves of Australian coal. "However, the Japanese are finding that they need our high quality coal for blending with their imports from Australia," he said

CP Rail prepared for new challenges

Facilities and equipment developed in the late 1960s have prepared CP Rail for the transportation challenges of a new decade.

N. R. Crump, chairman of Canadian Pacific, says the major advance is in the multi-modal transportation system and its potential in developing the natural resources industries.

He sees containers integrating with train, ship, truck, and air cargo for speed and reliability. High-powered unit trains will haul huge volumes of specific commodities to market and solids pipelines will become a reality.

New technology has created radical changes to railways, from computer-controlled freight yards to remote-control locomotives.

CP Rail starts the 1970s as a separate operating entity within the Canadian Pacific group. This reorganization of the entire Canadian Pacific group occurred May 1, 1969.

"At the same time executive functions within the operating and marketing organizations were realigned and streamlined to provide increased flexibility in anticipating and meeting customer needs and requirements," says R. A. Ferguson, CP public relations representative in Calgary.

"The reorganization is aimed at sharpening CP Rail's edge in the competitive environment created by the National Transportation Act of 1967," he added.

Changes in pricing permitted by the Act are such incentives as multiple-carload rates and trainload or unit train incentives.

Mr. Crump said the volume of potash, liquified petroleum gases, wood-pulp, pulpwood, newsprint, vehicle parts, trucks, pool car traffic and piggyback traffic had all increased.

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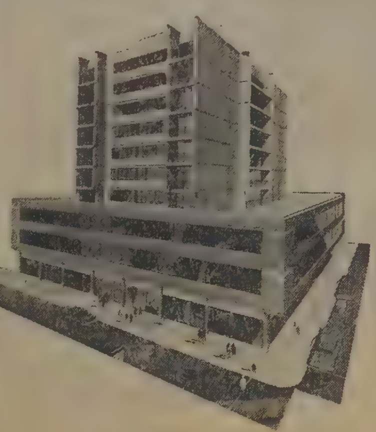

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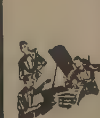

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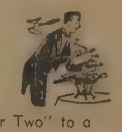

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Railway hopes to expand freight volume

With the tremendous resource development likely in the North, Canadian National Railways looks forward to a decade of expanding freight volume.

"By virtue of our location in the central and more northern parts of Alberta and British Columbia, the Canadian National will continue to see increased or new resource discoveries and industrial development," says D. F. Purves, vice-president of the CN's mountain region.

"To meet this increased traffic level which we foresee, we are now implementing a program of siding extension, centralized traffic control, and other plans to increase track capacity."

SERVE FIRMS

Mr.Purves said that as new resources were discovered the Canadian National has put in branch lines to serve them.

Such extensions include that to Windfall for three new sulphur extraction plants northwest of Edmonton, the Alberta financed railway line to Grande Cache and Grande Prairie, and other branch lines to serve developing resource industries.

"At the western end of the CN transportation network there are now two well equipped bulk terminal facilities on the north side of Burrard Inlet," Mr. Purves said.

"Alberta coal will go to Neptune Terminals initially. I expect that new contracts will be taken across B.C. to a north Pacific port such as Prince Rupert or Kitimat by our line.

"This would give coal moving to Japan two routes and the northern route offers a two-day saving in marine transport to the Orient."

CN has completed facilities for moving freight to the north side of Burrard Inlet. Another line is being built to the Robarts Bank bulk loading harbor, south of Vancouver.

CTC SYSTEM

For moving great volumes of coal, the railroad has installed the centralized traffic control system, heavier rails weighing 132 pounds per foot instead of 115 pounds. These rails are generally being welded into 1,209 foot lengths.

"Cars are beginning to be delivered to us from the builder," Mr. Purves said. "The coal handling equipment at Neptune is nearing completion."

CN is moving potash through Alberta from Saskatchewan and bringing phosphate rock to Alberta for the fertilizer plants at Fort Saskatchewan and Redwater.

Sulphur, forest products, agricultural products, particularly grain and meat, and petroleum products all contribute to a large volume of traffic to the system.

Future trends are for larger railway cars and longer trains to develop a more economical way of carrying freight, Mr. Purves said.

More pulpwood is being carried in packages on bulkhead freights and the CN is purchasing more of these cars to keep ahead of the growing Alberta industry.

GROWING TRAFFIC

"I feel we can look forward to the continuing increase in requirement for railway transport by reason of the nature of the traffic," Mr. Purves said.

"The long haul and the heavy bulk material give the railroad a competitive advantage. By 1980 we will be moving much more freight for every year has seen an increase in traffic movements."

Northern track may feed a large part of the mainline increase. The Great Slave Lake Railway is a significant feeder for the development of the Canadian Northland.

ESSENTIAL LINK

"The line was originally constructed in expectation that the bulk of the traffic handled would be lead, zinc concentrate from the Pine Point area.

"Since the completion of the line a growing tonnage of oil well and drilling supplies and equipment has been moved up to the barge at Hay River," Mr. Purves said.

"We expect this traffic to grow and if a natural gas pipeline or oil pipeline from the Arctic up the Mackenzie to the heartland of North America becomes a reality shortly, undoubtedly the CN line to Great Slave Lake in combination with barge service on the Mackenzie will be an essential transportation link."

EXTEND LINE?

There has been speculation that the GSLR might be extended to some point down river to extend the open water season. CN has not indicated if they are seriously considering the extension.

"Much of the material we handle out of Alberta goes to export positions for world markets and the volume of traffic we handle reflects the competitiveness in these markets," Mr. Purves said.

Roberts Bank terminal

A three-mile causeway snaking out from the mainland hooks onto the 50-acre Roberts Bank bulk coal-handling terminal. The port south of Vancouver was created to handle giant dry-bulk carriers.

Small NAR expansion possible

Rising costs in the 1970s will mean longer trains, increased automation, and closure of unnecessary lines for the Northern Alberta Railways.

Ken Perry, general manager of the NAR, says development of natural resources in Northern Alberta should increase the amount of bulk freight hauled in the next decade and spark the development of new short lines.

"I can't give details at this point, but the general level of development in the resource industries in the North makes me hopeful of the possibility of railway extension," Mr. Perry said.

PUSH NORTH

By 1975 the rails ending at Fort McMurray might well be pushed over the Athabasca River and forward for another 20 odd miles to service the Alberta oil sands.

"Oil companies haven't confirmed it, but it would appear that the railroad line would be necessary if the pace of development for the oil sands was to increase," said Mr. Perry. "The NAR is there to supply that service."

Several short lines could be established in the Peace River Block. Efforts to bring pulpwood and other products from the North of the block could be a major spur for new lines.

"The future of rail transport is in the movement of bulk products and the handling of less than carload express and freight," Mr. Perry said. For the NAR the shift will be toward minerals.

During 1969 grain was the largest single product moved by the railroad. A breakdown of major products showed: 14,445 grain cars; 6,958 ore and concentrate cars: 8,673 cars of forest products; 6,038 cars of petroleum products; 561 cars of grass seed, and 297 cars of sulphur.

Grain shipments could decline in the next 10 years as the Peace River farmers shift to more livestock production, Mr. Perry said. Substantial increases in shipments of forest products and ore concentrates are expected.

COULD DROP

"Petroleum products will increase in volume until someone establishes a refinery in the North. Then this traffic could drop considerably."

Sulphur shipments could increase greatly beyond 297 cars, if a market could be developed. The Great Canadian Oil Sands Ltd. plant can now produce 2,000 cars annually and Syncrude Canada Ltd. would probably add to this.

Reducing operating costs must continue to be an important point in the NAR objective. With wages accounting for 50 per cent of the transportation cost, railway costs are very sensitive to inflation.

"Improved automation is the only way we can keep in the ball game," Mr. Perry says. "I can see higher powered units and longer trains.

"Right now we run trains 150 cars long. There is a limit to the possible increase in train length".

Mr. Perry said lines of competitive companies located close together would likely be rationalized during the 1970s. This could see the abandoning of one line, if the other, operated under joint use, could give equivalent service.

CUT SERVICE

Cost cutting could mean the reduction of some service.

"We are still waiting on the Canadian Transport Commission to rule on a passenger train now operating between Edmonton and Dawson Creek."

The NAR wants out of this underused service which has been operating at a loss for some time.

"We do have a mixed passenger-freight train on the Lac La Biche to Waterways run, but we have no intention of withdrawing this service," Mr. Perry said.

"It is the only means of land transport available and passenger use is high. We get from 40 to 60 people on a trip."

FEW REDUCTIONS

Mr. Perry does not expect that any lines will be discontinued in the next decade with the exception of the track between Barrhead and Busby.

"This line is operating at a loss, but the Canadian Transport Commission has assured its use until 1975."

Although the CTC will likely vote to keep the line in 1975, the NAR will make application to drop the service. This will allow the NAR the 80 per cent federal government grant which partially offsets the loss to the railroad.

Main bus firm merger starts expanding era

Bus transportation in Alberta begins the 1970s with a $3,000,000 merger which consolidates most bus lines under one company.

Last Thursday R. L. Borden, president of Greyhound Lines of Canada Limited completed a contract with R. N. Dalby, corporation vice-president of International Utilities Ltd. for purchase of the Canadian Coachways System.

In a prepared release, Mr. Borden stressed that the sale was in excess of $3,000,000 on a straight cash basis with no dilution of equity.

7 MILLION MILES

Coachways — including its wholly-owned subsidiary, Alaska Coachways — serves 6,700 miles in Northern Alberta, British Columbia, the Northwest Territories, Yukon, and Alaska.

In 1969 the firm covered in excess of 7,000,000 bus miles on this route. The system has 75 units with an average age of seven years.

Greyhound officials say the merger will mean better service for Albertans. Greyhound's fleet of 200 deluxe inter-city buses are only an average of four years old, and the acquisition will result in an upgrading of the present equipment on the Coachways route.

At the same time the acquisition will increase Greyhound's total passenger miles by 25 per cent and the total revenue by 22 per cent.

MANY ADVANTAGES

Advantages stemming from the merger include:

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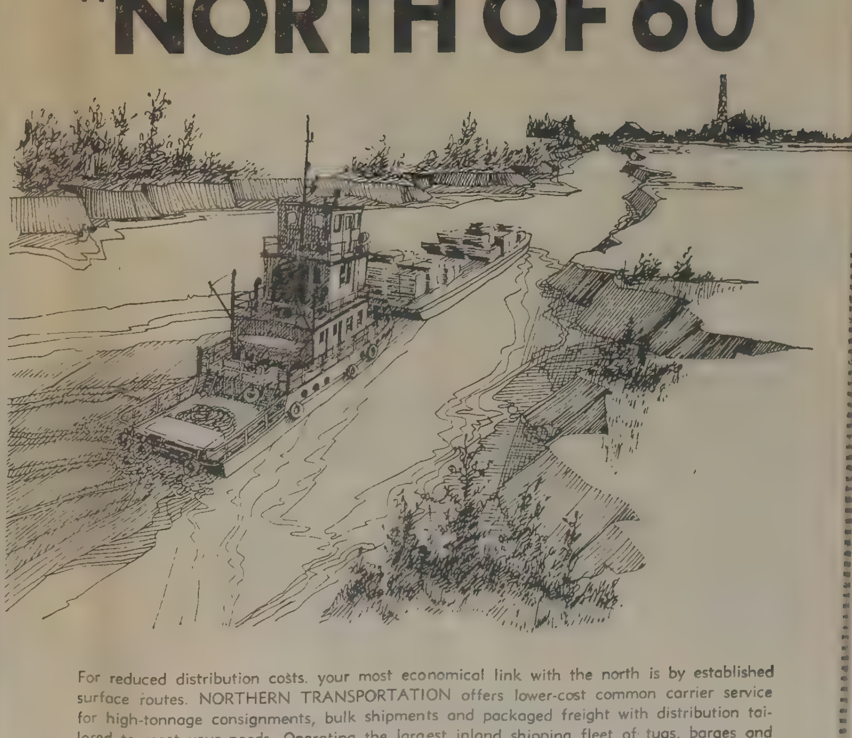

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TRIPLE TRAILER UNITS BEING TESTED IN ALBERTA
. . . despite protests from Alberta Motor Association

Trucking vital to rural life

Trucking—the key industry for many Alberta communities and businesses—will come into its own in the 1970s.

"I don't feel our industry has yet come of age, but it has grown at a tremendous rate in the last 10 years," says Bob Drinnan, executive secretary of the Alberta Motor Association.

Alberta has 1,900 of the 7,000 trucking companies in Canada. These firms provide the only commercial transportation service to 2,076 communities in the province.

The Alberta Motor Transport Association estimates that the direct payroll from the trucking industry is $55,000,000 for Alberta. Added to this is the earnings of the self employed truck drivers.

HEAVY LOAD

Although seven per cent of the commercial trucks registered in Alberta are for-hire, they haul 91 per cent of all freight moved by truck. This represents some 75 per cent of all tonnage shipped.

Some industries depend almost entirely on trucks, including Alberta's large agricultural industry. The AMTA estimates that 90 per cent of all agricultural products move by truck at some stage, 97 per cent of frozen foods, 75 per cent of fruits and vegetables, and 90 per cent of the livestock.

Gordon Taylor, minister of highways and transportation, says that the use of trucks will increase in the new decade as trucks prove their flexibility and as rail lines are abandoned.

HOLD THE LINE

"The trucking industry itself is looking at its rates," Mr. Taylor said. "They are seeking bigger payloads to hold the line on rates."

The use of double and triple trailers has been one of the ways the industry has increase tonnage hauled as the cost of hauling increased.

Rising costs to the trucking industry have been reflected in increased rates, but rate increases were applied to specific high cost areas, Mr. Drinnan said.

Charges on less than truck load shipments were increased recently between Calgary and Edmonton. These shipments were said to increase costs greatly, because drivers had to go all over town to get full loads.

The rate between the two cities went up Jan. 5 from $3.35 to $4 on general shipments of 100 pounds or less. Rates on 1,000 pound shipments increased by 11 cents a 100 pounds, while those on bulk shipments did not move.

The triple trailer, if accepted for highway use could help keep these rates level, Mr. Drinnan said.

In some cases rates have come down. In 1950 the rail on beef to Eastern Canada was $4.75 per 100 pounds. Five years later the truck rate was almost a dollar less, and by 1969 trucks were hauling beef for $3.11 and less.

RATES DOWN

Between 1960 and 1969 the rates on moving lumber from Armstrong, B.C. to Calgary dropped from 63 to 34 cents a hundred pounds.

"The day of the small operator has gone," Mr. Drinnan said. "Industry has applied both management skills, research and professional training to progress."

The use of triple trailers on Alberta highways is one part of this research. Trucking companies, the AMTA, and the government are co-operating in an experiment to determine the feasibility and safety of the highway train. They have been criticized by the Alberta Motor Association which contends the units have been proven a safety hazard in other areas.

One failing of industry in the next decade is that more and more trucking companies will be forced to merge by raising costs and the need for sophisticated equipment.

Mergers will trend toward the internationally owned conglomerates and the control of the trucking industry will fall out of Alberta hands.

Part of the sophistication are computers already used in the trucking industry. During the next 10 years the computer will find uses for dispatch, billing, routing, accounting, maintenance records, and forecasting.

The AMTA expects that rate structures will become more selective, and will be tied more closely to the needs of the shipper rather than to the general categories.

"There will be more and more specialization and more bulk shipments," says Mr. Drinnan. Already bulk carriers move milk, sugar, flour, salt, cement, fertilizer, explosives, petroleum products, printer's ink, and grain.

PRODUCTION LINK

Trucks are expected to become part of the production line in manufacturing plants. Materials will be kept in constant dependable transit rather than storage. Inventories will be consequence be greatly reduced.

Pioneering in Arctic transportation is already having a tremendous impact on the trucking industry. Edmonton based trucking companies are testing equipment and methods of building winter roads to make the most of the North accessible by truck.

Technology will reduce hand loading and decrease loading time and cost. Improvements will increase turn-around, reduce damage claims, cut insurance and compensation costs, make better use of road and dock facilities, and minimize handling.

KEY ROLE

Inter-modal systems of truck-rail-air,-ship will become more and more part of the transportation picture. Trucks will play an important part in this system as a possible feeder at both ends of the chain and a transfer agent in the system.

The jumbo jet, used as freight carrier from Europe to Edmonton International Airport, is considered a possibility by some. If this pattern develops, the trucking industry could become the distribution element for the province.

Provincial progress depends on transport

Improved transportation is the key to progress in the 1970s, says Gordon Taylor, Alberta minister of highways and transport.

The provincial government gave recognition to the significance of transportation in the growth and development of Alberta by adding the name "transport" to the highways portfolio in the late 1960s.

Mr. Taylor sees one of the key roles of his department as keeping abreast of not only the latest methods of road building, but also of rail, air, water and urban transportation.

KEY CHALLENGE

"One of our key challenges will be to co-ordinate these various modes to have an efficient transportation system," Mr. Taylor said.

Mr. Taylor said government would show close concern with railways wanting to abandon lines and reduce passenger service.

"I think they have a place to stay in the moving of people," Mr. Taylor said. Applications for reduced rail service have to be viewed in terms of the "total affect on the community."

In the 1970s, the air industry will be important from a national and international point of view to Alberta, Mr. Taylor said. It will stimulate tourism and trade.

MAJOR TASK

Highways will continue to be the major work of his department, Mr. Taylor expects. More and more of this will be tied to urban transit, but if money is made available a comprehensive grid system is foreseeable.

Road work in 1970 or later cannot be forecast accurately until this year's budget is approved by the legislature. Mr. Taylor did point to some major projects which are necessary and may receive authorization in the near future.

The completion of the Trans-Canada Highway between Calgary and the Banff Park Gates is likely in 1970.

WORK PLANNED

Work is planned for Highway 16, the Alberta section of the Yellowhead Highway. Mr. Taylor said that as funds allow the entire highway will be brought up to modern standards.

Immediate work is planned for widening and the addition of shoulders to the section of Highway 16 east of Edmonton between the Mundare corner and Vegreville. Work at dividing the highway in the Edmonton area will be continued.

Twinning Highway 16 West of Edmonton will be carried out in accordance with traffic demands. Mr. Taylor expects this will have to be completed by 1980.

Other major projects include the completion of the paving of the Fort McMurray Road and the paving of the major highways in the Lesser Slave Lake Area and the Swan Hills area.

Mr. Taylor says the Lesser Slave Lake route, Highway 44 and Highway 2, is a major way to the North and an excellent tourist route. The paving of Highway 49 to Spirit River is another project under consideration.

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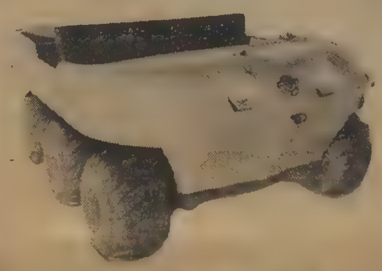

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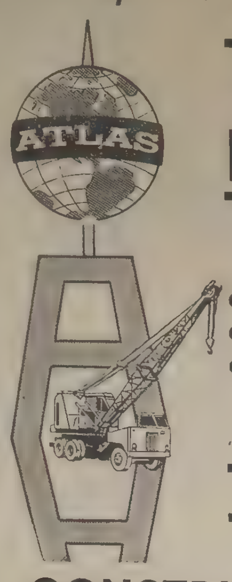

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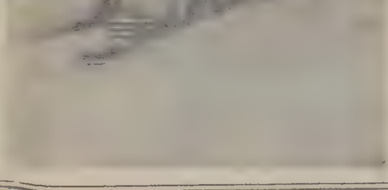

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FIBERGLAS CANADA LTD

Air Canada has big plans for Edmonton

Air Canada plans new facilities and systems for the Edmonton area during the next few years.

Nationally and internationally Air Canada enters the decade of the jumbo jet with plans to make necessary adjustments to incorporate the largest aircraft now flying and eventually take the supersonic craft being developed.

The first passenger flight of the jumbo Boeing 747 on Jan. 11, 1970 aptly placed the focus of attention on the aircraft and shows the trend for the 1970s will be larger faster aircraft, more passenger travel, and improved systems to provide better service to the customer.

SEVERAL CHANGES

"At Edmonton International Airport we are already working on several changes to improve the passenger facilities for customer convenience and service," says Allan Sutherland, Air Canada's district sales manager.

These improvements will include the completion of a second covered loading bridge within a very few months. The first at the airport was completed last fall at a cost of $75,000.

Improved ways of handling passenger baggage are being incorporated and Air Canada will increase their storage and working area in the terminal building.

FLIGHT KITCHEN

This space will be made available by CARA Operators (Alberta) Ltd. which operates a flight kitchen preparing over 3,000 meals daily for passengers departing Edmonton.

CARA is planning construction of an expanded flight kitchen which when operational will be worth about $500,000. The facility is considered necessary to supply increased traffic and larger aircraft which will eventually land at Edmonton.

Within three years Air Canada expects to have completed a new cargo terminal at the International Airport. With freight running in excess of 1,000,000 pounds monthly since last fall, plans have been made to erect a cargo terminal similar to those Air Canada has now completed in London and Winnipeg. The previous ones are worth about $3,500,000 each.

MAJOR MOVE

"In Edmonton our major achievement in 1970 will be moving into new offices at the Cambridge Building," Mr. Sutherland said. "We have now established our reservation office across the street on the main floor of McCauley Plaza."

District sales offices, administration offices, passenger and cargo handling services, and some reservations people will have offices in the Cambridge Building.

The shift to the new offices will be well under way by spring, Mr Sutherland says.

A major technical addition to the new location will be "ReserVec II". Reservation and flight information will be shifted quickly through individual monitors which look like television screens equipped with a keyboard.

The Edmonton system is to have 32 monitors in the Cambridge Building. Six others will be placed in the sales department and four at the airport.

On the national level, Yves Pratt, chairman and chief executive officer of Air Canada, said the firm will have a small profit on 1969 operations. This would be the 16th profit year in the past 19 years.

Revenues were reduced by the 28-day strike last spring, increased competition on trans-Canada services, and competition from non-scheduled carriers.

COSTS JUMPED

Labor costs jumped seven per cent in the past year, while total employment increased by three per cent.

Air Canada carried 6,490,000 passengers on scheduled flights in 1969, an increase of two per cent over 1968.

Air freight increased by 22 per cent to 149,400,000 ton miles, while air mail rose to 25,800,000 ton miles, a jump of 13 per cent.

Air express fell off one per cent to 7,800,000 ton miles.

NEW PLANES

Air Canada has definite plans to incorporate bigger and faster aircraft throughout the next 10 years.

During 1971 Air Canada is to purchase three Boeing 747 jumbo jets. A $15,000,000 building is being prepared in Montreal to service these aircraft and others.

"Plans have been completed to purchase 10 Lockheed L-1011 (Tri-Star) airbuses from Lockheed Aircraft Corporation for a total of $175,000,000," Mr. Sutherland said.

"We take delivery of the first of these in 1972," Mr. Sutherland said. "These are 270 passenger aircraft which will be used for high density routes in North America.

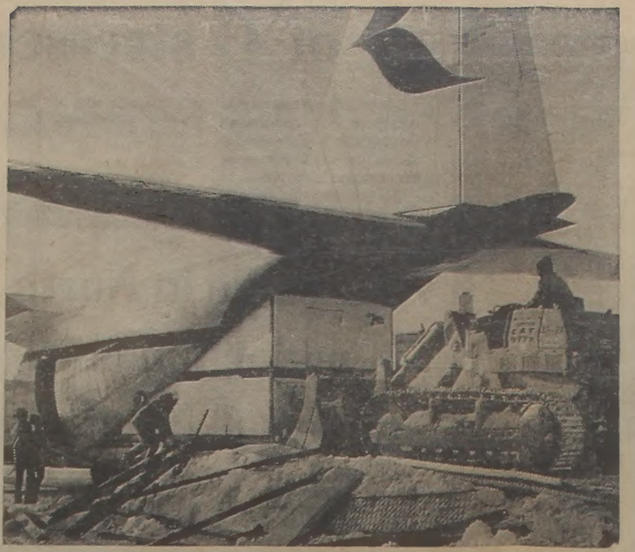
"In addition we have options to purchase four of the Anglo-French Concord supersonics when they are available for service.

GO SUPERSONIC

"Late in the 70s the airline holds options to take six of the U.S. Supersonic Transports which are currently being developed by Boeing Aircraft Company."

Air Canada recently purchased and has on order some $500,000,000 worth of DC-8 and DC-9 jets from McDonnell-Douglas Aircraft Corporation.

The firm is seeking to expand it flights into the United States during the current bilateral talks. Direct air links with San Francisco and a Winnipeg-Chicago run are among those sought.



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PWA switching to jets

The transition to a jet airlines is well under way as Pacific Western Airlines enters the 1970s highly involved in the expanding North.

The Vancouver-based airline began its change-over in 1966 and by 1969 was far enough along to change major runs to pure-jet aircraft.

Don Watson, PWA vice-president, said plans for the next five years include three more of the 107-passenger Boeing 737s, scheduled international routes, if government permission can be gained, and the completion of a PWA-owned hotel at Yellowknife.

1969 HIGHLIGHT

Harry Herbert, PWA's regional public relations manager, says the major highlight of 1969 was PWA's acquisition of interior British Columbia routes from Canadian Pacific Airlines and the upgrading of these routes from piston to jet aircraft.

These routes included Vancouver - Kamloops - Calgary and Vancouver - Penticton - Kelowna - Cranbrook - Calgary. It linked for the first time the two major bases of PWA, namely Vancouver and Edmonton.

While the Southern Alberta - British Columbia ties are being established further north, the Edmonton - Prince George flight was extended to serve Prince Rupert and connecting the new granted licence to serve Prince Rupert to Vancouver.

NEW SERVICE

In the Far North, the flight from Edmonton to Cambridge Bay was extended 450 miles to Resolute Bay. This service gave Western Canada a commercial service to Resolute Bay 2,000 miles shorter than the previous route through Montreal from Edmonton.

The federal Department of Transport paved the runways at Norman Wells and Inuvik to facilitate the use of the Boeing 737 jet. The three flights per week were increased to five.

With the 737 came containerization of freight. Fibre glass containers nine feet square are carried in the forward cabin of the aircraft ensuring protection from breakage or loss. The containers

Byers Transport was purchased in April, 1969.

As road transportation penetrates farther north, the use of truck-air combination becomes increasingly important and is doing a great deal to further the development of both resources and communities, contend PWA.

The total commercial tonnage available in 1968 in the Western Arctic supported a Lockheed Hercules Freighter for only five months of the year. The balance of the utilization was made up of international freight movements.

Pacific Western, the only commercial operator of Hercules aircraft in Canada, worked in over 40 different countries in 1968.

In 1969 the Hercules fleet was increased to three — all of which are the newest "stretched" version to give greater cargo hold volume. These aircraft were occupied almost exclusively in Northern Canada. The oil exploration in the Canadian Arctic and Mackenzie Delta have accounted for the greatest increase.

Wardair seeks new business

Edmonton-based Wardair Canada Ltd. is striving for more international passenger and freight business.

Max Ward, Wardair president, says that although the airline will be landing at airports around the world in the next decade, it will continue to serve the North where the firm began.

"We will continue with charter flights during 1970," Mr. Ward said. "We have advised the government that we are most interested in acquiring scheduled international services."

"We are certainly looking at the United States and Europe, but there is no room for us in the domestic scheduled industry."

BETTER EQUIPMENT

Mr. Ward said his company is better equipped for international flights. The best performance from the two Boeing 707s and the Boeing 727 can be achieved on long or medium range flights.

"Our firm has had a big growth in the passenger charter business," Mr. Ward said. "We see a big potential in the marketing of inclusive tours."

Wardair carried 50,812 passengers in 1969, up from 30,000 in 1968. Mr. Ward Expects to carry 70,000 passengers on round-trip charters in 1970.

NEW DESTINATIONS

New destinations will be added to the inclusive tour besides Hawaii. Mexico and Spain will be added in 1970, and Mr. Ward can see potential in the Orient.

"We are looking at the wide bodied jets for international flights," he said. "I am not saying it would be the Boeing 747. The Lockheed 1011 and the DC-10 are possibilities."

Mr. Ward does not expect the wide bodied aricraft to come into use by Wardair by 1975. Even with jumbo jets, he doubts if passenger rates can be greatly lowered in the 1970s.

GOOD POTENTIAL

Flying chartered loads of freight on international trips appears to have a good potential, and Wardair will devote one 707 to this use in the fall.

"Expanding international operations will not be done at the expense of our Northern operations," Mr. Ward said. "At this time, however, we will not be expanding our Northern fleet.

"We are still trying to find an aircraft suitable of flying long distances and landing on rough airstrips which oil development in the Arctic demands," Mr. Ward said. "The Hercules is fairly effective, but another carrier is already using several of them and the market is limited."

REVENUE UP

"We had a fairly good year in 1969, although it was not as good as we had hoped for," Mr. Ward said. "Our gross revenue is up by 30 per cent over 1968.

"We didn't do as well on our Northern operation as in 1968, but we did increase our gross revenue in the North," he said.

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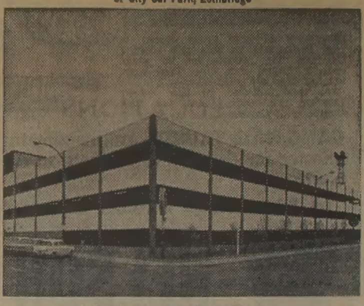

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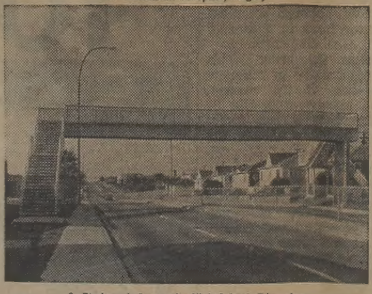

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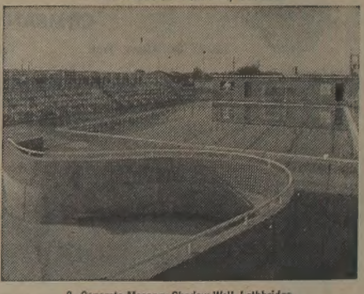
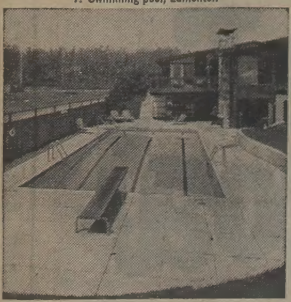
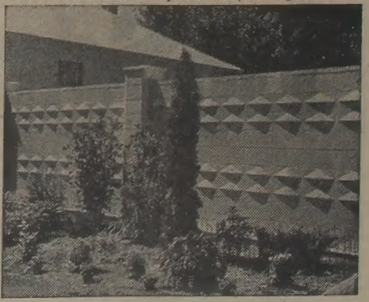


6. St. Joseph Composite High School, Edmonton


7. Swimming pool, Edmonton


8. Concrete Masonry Shadow Wall, Lethbridge


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North key to future

Edmonton's newest airline expects to be very much involved in the great Northern expansion during the new decade.

"We will be a major part of the Northern development," says Harry Hayter, president of Air Commonwealth (Alberta) Limited.

The airline was formed last fall after a re-organization of Keir Air Transport Limited which operates out of Hangar No. 9 at the Industrial Airport.

"We are looking at various types of bigger aircraft to add to our fleet," Mr. Hayter said. The company has been operating five DC-3s, five Piper Aztecs, a Cessina 411, and a Cessina 180.

Mr. Hayter said the firm has been spending the first months of operation re-organizing its operations both in Edmonton and the Far North.

Considerable time was spent preparing a DC-4 for northern work.

"By 1980 we hoped to have expanded the base of our operation greatly," he said. "We are striving to be one of the top airlines."

"We are very busy now and have been since we started. We expect this situation to continue."

The firm currently operates one schedule air service, from Hay River to High Level to Peace River on a four-day-a-week basis.

Stan McMillan, Air Commonwealth's general manager, has predicted that this winter will see a lot of activity on the North Slope and the Arctic Islands.

The firm does charter work for many of the major oil and mining development companies in the North. Charter flights handle both freight and passengers.

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CP Air sees solid growth

Bright orange, red and silver aircraft will become more common in Northern Alberta during the 1970s.

CP Air anticipates it will handle 200,000 passengers at Edmonton International Airport by 1974. In 1969 passengers boarding and deplaning ran close to 100,000.

Rapid growth in passenger figures in recent months was stimulated by the addition of Edmonton to transcontinental services in 1968.

Airline spokesmen say the traffic increase in 1970 should be 10 per cent. Plans are being made to add a second daily transcontinental flight to Edmonton as soon as it is warranted and government approval is given. This flight could start in 1970.

Possible additional service in the 1970s besides Trans-Canada flights could be those to Grande Prairie, Fort St. John, Northern B.C. and the Yukon from Edmonton, as well as the non-stop flight to Amsterdam.

The airline's technical staff are working with the Department of Transport on long range plans to expand the Edmonton International Airport. This would include modifications to the terminal building, airbridges and other facilities for handling larger aircraft.

J. G. McKeachie, manager of public relations for CP Air's western region, says the aircraft industry is so dynamic that prediction of doubling passenger traffic in five years is as close as possible.

Variable factors include the introduction of wide-bodied jetliners and later the supersonic, he said. The 350-500 passenger jumbo jets will mark the first half of the decade.

"The supersonic transport, or SST, is still on the horizon for air travellers in this area," he said. "The 1,450 miles-an-hour Anglo French Concorde, still in the early flight testing stage, is not expected to go into commercial service for two or three years, perhaps longer in Canada.

MANY DELAYS

"The 1,800 m.p.h. American SST (Boeing 2702) has encountered numerous development delays, is still on the drawing boards, and will not be operating commercially until at least 1978."

John C. Gilmer of Vancouver, CP Air president, says the best air bargains will be available in the 1970s, but serious economic problems will test airline managements for some years.

"During the 1960s airlines enjoyed a period of healthy traffic growth stimulated by the appeal of the jets and by energetic marketing programs," Mr. Gilmer said.

ECONOMIC PRESSURES

"The prospect now, however, is for the introduction of more and larger aircraft which will undoutbtedly result in an overcapacity situation. This, in turn, will exert economically unsound pressures for lower fares at a time of rapidly escalating costs.

"Unless the lower yields are compensated by adequate stimulation of the market, airline managements will be challenged by serious profitability problems during the next several years," Mr. Gilmar stated.

Lower seat-mile cost of the bigger aircraft is only partly possible. Airline customers will have more speed, greater comfort and more room, but will likely have to pay higher prices.

MORE ROUTES

Mr. McKeachie said CP Air plans expansion to handle its problems. It seeks more Canada-United States routes from the bilateral air talks. Routes sought include Vancouver-Los Angles, Toronto-San Francisco, Toronto-Chicago, Montreal-Chicago, Vancouver-Chicago and/or New York.

CP Air plans to start air service to Tel Aviv, Israel if Canada-Israel negotiations are successful.

Traffic in 1970 is expected to increase with scheduled and spcial charter flights to Expo '70 at Osaka, Japan.

ALL JET

CP Air became all jet with the completion of delivery of seven Boeing 737 medium range aircraft last April. The last propeller-driven aircraft, DC-6Bs were sold when the company relinquished routes in British Columbia.

This spring, two Boeing 727 tri-jets will be delivered to CP Air. Studies are continuing on high-capacity wide-body aircraft and decision will likely be reached on placement of orders this year.

CP Air has three delivery positions for the U.S. supersonic jet and is considering the Concorde.

It starts 1970 in a new $24,000,000 operations centre at Vancouver International Airport which has the largest hangar in Canada. The hangar will handle wide-bodied and supersonic jets.

C of C stresses transportation

Edmonton's chamber of commerce has re-organized its structure to place emphasis on the city's transportation problems in the 1970s.

The new structure replaces the transportation committee with a special board which will integrate with all other chamber committees. E. S. Knutson, president of Alberta Tractor Parts Ltd. is chairman of the board.

"Transportation is a big factor in all the city's industries," Mr. Knutson said. "It is highly necessary to co-ordinate transportation objectives with all other plans in the city."

Matters of improving air service, rail service, development of rapid transport, and improved highways both within and outside the city are matters of chamber concern.

"We are vitally interested in getting the Yellowhead Highway classed as a major trans-Canada highway," Mr. Knutson said. "We must encourage the government to improve Highway 16 east of Edmonton."

Mr. Knutson said the nation must be made aware that Edmonton's two airports have far more traffic than Calgary's international. New flights must be encouraged to the city.

Calgary International Airport handled 231,481 aircraft take-offs and landings during 1968, the department of transport reports. The combined Edmonton airports had 242,514 aircraft movements in 1968. The military flights from Namao are not included in this figure.

Edmonton Industrial Airport handles by far the most traffic. Although Calgary opened Spring Bank Airport for light aircraft in 1969, it is estimated the Edmonton area still handled 11,000 more civilian flights last year.

"Rapid transit is a thing we have got to look at," he said. "We must try to establish an urban communications policy in the coming year for the 1970s."

With rail freight, rates must be examined and order must be designed into the rate structure, Mr. Knutson said. Railroads should not be permitted line abandonment or rate increases without very careful considerations.

"We are trying to get some assurance that Greyhound will maintain good service for this area, now they have taken over Canadian Coachways."

MID-CANADA CONCERT

Throughout the 1970s, Edmonton must work to encourage the development of the mid-Canada transportation belt, Mr. Knutson says.

"We have the potential in this area to do more development of the North than any other Canadian province," he said. "The Edmonton Chamber of Commerce and the Alberta government have got to make transportation industries develop to make the most of this potential in the next decade."

Big stake in North is major impetus to Great Northern

Great Northern Airways Ltd. of Calgary enters the 1970s as an expanded firm with a big stake in Northern development.

The growing airline is one of the few Alberta firms working in the territories which does not have an Edmonton base. The company hopes to be landing aircraft here in the coming decade.

"We expect the oil exploration in the northern Territories and the Arctic Islands to continue with present and expanding programs," says Roger Jarvis, marketing and sales manager for Great Northern. "With the discovery of oil there is a complete new picture.

10-FOLD INCREASE

"We can expect at least a 10-fold increase in weight moved during the geophysical program and the follow-up drilling program," Mr. Jarvis said.

"Airline services that are now handled by charter will evolve into permanent Class I, II, and III routes serving the enlarged and new northern communities."

The North will give GNA a much brighter future than the majority of regional carriers, because of the great interest and exictement which comes with the oil discovery, says Mr. Jarvis.

Mr. Jarvis said GNA had a profit in excess of $200,000 in 1969.

"GNA should hear shortly regarding the application to the Air Transport Commission to import and operate two Bristol Britannia aircraft from Calgary with en route stops at Edmonton en route to the North," Mr. Jarvis said. "These aircraft will open additional areas of opportunity."

At the end of November, 1969 GNA and Northward Aviation Ltd. announced their attention to merge as GNA. The combined company would have 32 aircraft.

The combined companies have applied for routes between Whitehorse-Fairbanks; Fort Nelson - Fort Simpson-Wrigley-Norman Wells; Fort Good Hope-Inuvik, Holman-Cambridge Bay, and Coppermine-Cambridge Bay.

"We are very enthusiastic about the prospects for the future and feel that GNA will play a major role in the expansion of aviation in Alberta, the Yukon, and the Northwest Territories."

Checks track

Canadian National Railways has developed a track recorder to check conditions on its 25,000 miles of line.

The track recorder car was developed by scientists at CN's technical research centre in Montreal.

The car is a converted coach filled with machines and computers which are capable of measuring and evaluating track conditions at speeds up to 100 miles an hour.

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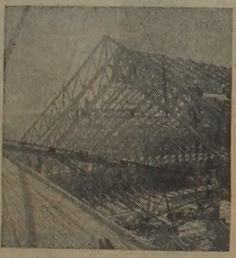

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Flexibility of roof truss design is well illustrated in this salt storage building. The trusses are 85' clear span 3 Hinged arch type. They were erected over the piles of salt. Trusses were manufactured in the Nelson Lumber Edmonton plant for Salt Company of Canada.

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AGT planning record construction program

Alberta Government Telephones has budgeted a record $82.5 million for 1970 to meet the province's rapidly increasing communications requirements.

A total of $19 million is being spent on long distance facilities. Projects include the northern interprovincial radio system; one leg of the Edmonton metropolitan junction; co-axial cable between Calgary and Aldersyde, Calgary and Banff, Edmonton, Leduc, Calmar, and Breton.

A new microwave system is being placed between Brooks and Empress, and the old pole line between Vegreville and Lloydminster is being replaced with microwave and co-ax cable.

More than $16 million is budgeted for central office exchange equipment, dial additions, and new dial offices. Major dial offices are being built in Edmonton and Calgary, and smaller community dial offices will be put into service in Alder Flats, Altario, Bear Canyon, Flatbush, Grassland, Jarvie, Longview, Seven Persons, Spruce Grove, Widewater, Worsley, and Woking. Grande Prairie's replacement central office, with DDD facilities, will be completed, and additional switchboards will be installed at Edson and St. Paul.

OUTSIDE PLANT

A total of $6.5 million is to be spent on outside plant exchange cable, including a co-ax trunk system between the Calgary exchanges.

Construction expenditures of $10.6 million will be made on the new Head Office Building, during the year, and $8.6 million will be spent on building construction and equipment for the new Edmonton Toll Office.

In the rural areas, $10.9 million is to be spent on the four-party divided-ring rural buried cable program. Over 7,000 miles of buried cable and wire will provide service to an additional 10,400 subscribers and 4,200 prospective subscribers.

Telephone users by 1980 may no longer be subjected to that very annoying busy signal.

At least, Alberta Government Telephones makes this prediction in its look at the 1970s and beyond.

Electronic switching so complex that it will dial frequently used numbers at the user's command, and call back when a busy line becomes free is expected to be the answer.

Gerry Brice, AGT's public relations supervisor in Edmonton says this type of switching and the picture phone, which lets the talker see the party on the other end (perhaps in full color), are nearer than the customer can imagine.

WORK AT HOME

Commercial use of some systems already under test could allow more people to do their job without leaving home. Those people will even be able to cash their paycheques by dialing their bank's computer.

Some communications experts speculate that the next decade's advance in telephone systems will be so intense that the growth patterns of cities will be changed.

With the means of carrying out more and more work at home, businessmen will be able to live in the country and forget about commuting.

MORE INVOLVED

AGT plans to be more involved with communications electronics which are not directly associated with the telephone. Transmission of television signals by microwave and satellite will be only a part of this.

At the close of 1969, the provincial government owned system was firmly established in the Alberta telephone business. Its investment in telephone equipment passed the $468,000,000 mark.

By October the company had spent a record $43,000,000 and estimates its full year construction expenditure had passed $62.000,000.

MERGERS EXPECTED

During the year telephone service increased by some 45,000 telephones to about 695,000. AGT share of this growth was in excess of 30,000 systems to bring their total to 464,000.

"Although there are still many private rural systems in operation, we expect the majority to amalgamate with AGT by 1975," Mr. Brice said.

Rural mutual companies now own about 25,000 telephones. Some 3,000 were taken over by AGT in the past year.

USE COMPUTERS

In the past year AGT made computer time sharing available on a flat monthly rate. The system allows for automatic exchange of information between telecommunications devices regardless of code format or speed.

During 1970 AGT will be pushing forward its section of what is to be the second part of the Trans-Canada microwave system. A $1,700,000 Grande Prairie to Edson route has been completed and the Peace River-Dawson Creek segment is 80 per cent complete.

Major industrial projects in Alberta are requiring heavy AGT construction. A $126,000 facility is required. Last August a portable unit was established.

NEW EXCHANGE

AGT is installing $500,000 of individual telephone exchange facilities for the new town of Grande Cache.

The firm has filed an application with the Canadian Radio Television Commission for authority to establish an inter-city television distribution network to serve local community antenna television stations in the province.

CRTC denied the application on Dec. 3, but later reports indicate that AGT may be allowed to develop some type of system, particularly for isolated communities in the 1970s.

TOUCH TONE

AGT introduced touch-tone service in the Huntington Hills area south of Calgary and in Peace River and Drumheller. More areas are being planned to receive this service in the new year so complete conversion can be obtained in the 1970s.

Buried cable is becoming more common. AGT has invested $40,500,000 in a program which will ultimately bring four-party telephone service to virtually all rural subscribers in the province.

Approximately 34,700 miles of cable and wire have been buried, and facilities have been installed to provide more than 34,000 applicants with service since the summer of 1964.

MAJOR NETWORK

With the completion of the Alberta Resources Railway AGT completed a $2,200,000 network across the wilderness from Edson to Grande Prairie.

In the North, AGT worked in co-operation with Associated Helicopters Ltd. of Edmonton develop "Airmark." This is a method of precision surveying using closed circuit television and radio telephony.

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Fewer miles of new road likely for coming decade

Fewer miles of road may be built for more money in the 1970s, but roadbuilding contractors fear a lean future.

"The trend is to larger amounts of money spent in urban areas to move traffic," says Norm Faiers, manager of the Alberta Road Builders Association. "This will mean less actual miles of road built at a tremendous increase in cost per mile."

Mr. Faiers sees a lot more projects like the Capilano Freeway which cost several million dollars a mile. Gordon Taylor, provincial minister of highways agrees that with 80 per cent of the population in cities by 1980, urban roads must be important.

SEVERAL REASONS

The famine threat for road builders has several reasons. High cost per mile projects will require only a few highly specialized firms, equipment and labor costs are continually increasing while government expenditure on roads is staying relatively stable, and there is a possibility of "ruinous" tax changes.

By far the greatest threat is that posed by Finance Minister Edgar Benson's White Paper on Taxation. Its proposals have the association rushing to prepare briefs to government and engage tax experts.

KILL LITTLE GUY

"If the White Paper is adopted as proposed it is hard to imagine that the small road contractor will be around in 1980," Mr. Faiers said.

Mr. Faiers says the small contractor will be hurt in the following ways by the Benson proposal.

—Increasing the tax on the first $35,000 of business profit from 21 to 50 per cent will greatly reduce the capital the small operator can put back into his business.

—If the small contractor has a capital gain in the view of government, he may have to sell part of his business to pay the income tax.

FUNDS DOWN

Government funds devoted to road construction were $40,000,000 in 1967. In 1968 this figure slipped to $30,000,000 although an extra $7,500,000 of urban business opened up. In 1969 some $35,000,000 was tagged for road construction.

"Any increases will be prudent, because the government has a limited amount of money to spend," Mr. Faiers said. "We are hoping at least some increases do come along."

Roadbuilding costs have held the line during the past 16 years. Mr. Taylor says: "The Alberta road builders are to be commended, for it is cheaper to move dirt today than in 1955."

Machinery prices have increased during that period. Labor costs, although slightly offset by automation, have also gone up.

"In the matter of labor relations, 1969 was the year in which 18 members were required to negotiate a new agreement with the International Union of Operating Engineers," said R. S. Everall, president of the Alberta Roadbuilders Association, at its annual meeting in December.

"One member decided to 'go it alone,' starting a patter of fragmentation which will lead to the achievement by the union of significant advantages at the expense of the industry."

BIG INCREASE

Mr. Everall said the negotiations had averaged increases of 19.2 per cent a year. These increases, if they continued, could be insurmountable by 1975.

"The resulting increases in construction cost make us all wonder if we are on a course which will eliminate the private contractor and replace him with owners' work forces," Mr. Everall said.

The roadbuilding contractor was further hurt by the falling productivity of labor, increased interest rates, and extreme competition created by the over-capacity of contractors in relation to work volume.

CEMENT HIGHWAYS

Mr. Taylor mentions another change which may harm the small contractor. It is difficult to obtain good gravel in many parts of Alberta.

Cement highways are the answer to this problem, Mr. Taylor says, but this type of construction might well favor the multi-purpose construction company at the expense of the smaller builder.

Research and development of improved equipment has kept costs down in the last 15 years. Further research may provide the equipment which will allow a small contractor to find a profitable operation in a specialized field

Mr. Faiers admits that larger high cost equipment is often too cumbersome for urban transportation projects. Larger equipment, however, will continue to dominate the rural scene.

"In the next 10 years I don't foresee any new equipment to improve the road building industry, but with companies like Caterpillar spending about $65,000,000 annually on research and development anything is possible," Mr. Faiers said.

If the provincial government goes ahead with plans to develop the 8,500 miles of the grid road system, equipment of all construction companies would be kept on the road.

"We could very well have a keen industry in good shape for the small operator in 1980, if Mr. Benson lets him stay in business," Mr. Faiers says.

Rapid transit project key to urban growth

A major Edmonton project of the 1970s will be improving urban transportation to handle an additional 200,000 people.

Transportation problems in the downtown area are already being created by increasing traffic flows. Parking areas are few, and public transportation seems hardly able to cope with its existing load.

A preview of the general traffic congestion which could eventually develop is expected when the Oxford Leaseholds Building and the AGT Tower Complex are fully occupied as office facilities. These and other new buildings will place considerable strain on the downtown core's traffic plan.

REACH 640,000

Dr. E. J. Hanson predicted an Edmonton population of 640,000 in his report to council in March, 1968. The city's growing population during the two years since that report was compiled makes a population of over 700,000 people possible before 1980.

Public transportation will be in demand for moving people to work in the downtown area, but the current system will have to change or it will become hopelessly inefficient.

"The city has 360 buses now in operation and will suffer a loss on operations of about $1,000,000 this year," said Don MacDonald, superintendent of the Edmonton Transit System.

If the current system continues, he anticipates that twice as many buses will be required by 1979 and the loss will be about $4,000,000. New buses cost $35,000 to $40,000 each.

A different approach to urban transit must be followed in the 1970s. The only bright spot is that the Edmonton problem is nationwide and the provincial government may extend a helping hand.

Gordon Taylor, provincial minister of highways and transportation, says the province will be very much aware of urban transportation during the 1970s.

"Four-fifths of the population by 1980 will be in cities," Mr. Taylor said. "That is why we will be introducing the Urban Transit Act which will start a new era for urban transit."

PROTECT CORRIDORS

Mr. Taylor said the act is designed to protect traffic corridors through cities once careful planning has been carried out and corridors have been pin-pointed.

Careful study will have to be given to all modes of rapid transit — monorail, bus, trains — before investing in any particular type, Mr. Taylor says.

"Anything we do now has to be done with the future in mind," he said. Municipal governments must be sure of the feasibility of a system before entering into any program.

Mr. MacDonald says if funds are approved part of the rapid transit system planned for the Canadian National Railway tracks can be in use by 1974.

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CNT crews tackle tough task in North

Its a tough job—but Canadian National Telecommunications is extending its Northern communications system to keep pace with growing demands.

"We provide all the communications systems in the Yukon," said S. D. Daly, regional manager for CNT in Edmonton. "In the Northwest Territories a microwave system built by Alberta Government Telephones runs from Peace River to the border and we carry it from there to Hay River."

Telegraph and long-distance telephone service is provided by a landline extended from Fort Smith, Hay River and Yellowknife to intermediate points.

NEW SYSTEM

By 1964 CNT had added a tropospheric scatterwave radio system which linked Hay River with Lady Frankling Point, Coppermine and Cambridge Bay, on the Arctic Ocean.

The scatterwave transmits its signal into the sky rather than in the straight line used by most other systems. The radio waves bounce off the ionized layers around the earth and arrive at a distant receiver which may otherwise be cut off from the transmitting station by a mountain range.

The spine of the system was completed in 1966 when CNT finished a pole line along the Mackenzie River Valley to serve Inuvik and intermediate points.

With these facilities installed and a good start on a second link to Inuvik, CNT begins the new decade with about $80,000,000 worth of equipment in the North.

"We have about 13,000 telephone subscribers and over 1,000,000 long distance telephone calls from the North last year," Mr. Daly said.

"Last year we added about 1,000 lines in the whole area and started the Whitehorse-Inuvik line.

"After Prudhoe we had to do something to expand our facilities and started out by a combination microwave and tropospheric scatterwave system to connect the Delta with Whitehorse."

BOUNCE BEAMS

The tropospheric scatterwave is used to bounce radio waves over the Richardson Mountains. The microwave system can be used again from Arctic Red River to Inuvik.

"This system will be completed early in 1971 and will increase capacity sufficiently to solve our problems with Inuvik for a long time to come," Mr. Daly said.

Inuvik had a 79 per cent increase in long distance telephone calls last year, but this new system should handle five times the community's current population.

VERY USEFUL

With the recent oil strike near Tuktoyaktuk, CNT's multi-channel radio system between Inuvik and Tuktoyaktuk will be very useful when it goes into operation this month.

"Our biggest problem in the North is attempting to estimate the growth rate," Mr. Daly said. "There is a two year lag between planning and installation, so if we are wrong results can be damaging."

Generally in the North CNT is looking at a 25 per cent growth rate annually. Yellowknife is being planned for a 36 per cent growth rate and the new system to Inuvik will allow a 100 per cent growth rate for several years.

SPUR LINES

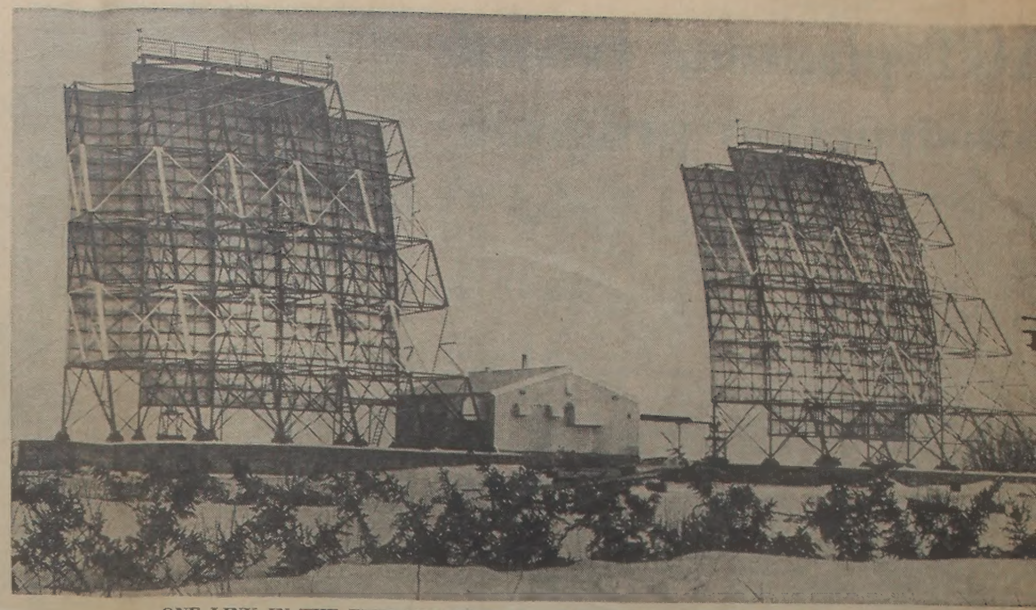
"We are planning a number of spur lines to serve small communities. By 1974 we should have direct distance dialing to Whitehorse and possibly at Hay River by 1975.

"In 1968 we started reducing Edmonton-Yukon rates and will have a further reduction in 1970."

Mr. Daly said finding a stable supply of labor to handle the Northern system was difficult. In 1967-68 CNT's Northern operation had a 35-40 per cent turnover.

Natural events in the harsh North can cause disorder to long range planning. Severe hoar-frost conditions reduced the Mackenzie Valley pole line to one-third capacity this winter. CNT plans to double-up on the repeaters in the line to solve this problem.

"We are gradually building up the expertise for working in the North so that we can make aircraft strips quickly and deal with the perma frost," Mr. Daly said. "More use of thermal electric generators and transistor equipment is reducing our maintenance needs."



ONE LINK IN THE EVER-LENGTHENING NORTHERN COMMUNICATIONS CHAIN
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North, computer major challenges of decade

Canada's telecommunications industry faces a dual challenge during the 1970s.

The system of communications between people in the North must be extended and improved as the region undergoes a high rate of development.

The general challenge throughout the rest of Canada is that of becoming equipped for the computer era. The telecommunications network will have to become capable of transferring data at phenominal rates between computers involved in all types of work.

Canadian National Telecommunications has the role of providing a network of radio and microwave towers and pole lines which will provide the North with a complete system of telephone, Telex, telegraph, radio broadcasting and private wire service

CN and Canadian Pacific Telecommunications will continue as an integrated system which will provide a wide variety of wire services, electronic functions and microwave transmissions.

S. D. Daly, regional manager of CNT in Edmonton, expects telegraph poles will still exist in 1980, but there will be a lot less of them.

Satellites may well be doing the job of transmitting information from coast to coast. Mr. Daly says plans are being made to set up a corporation owned jointly by the carriers, the federal government and the general public.

"As carriers, we have agreed in principle to use the satellite, but none of the details have been given," Mr. Daly said.

By 1980, the system will be a far cry from the system of 20 years ago when the main mode of transfer was the telegraph, the main message the telegram, and the Canadian system was the only one in the world where two national telecommunications networks competed for business.

New services will become more widely accepted. Mr. Daly notes that in 1954 Telex had 18,500 subscribers. Projections indicate this figure will have reached 50,000 by 1980.

In the next 10 years plans call for additional broadband communication for faster telex service and for high speed computer-to-computer data communication.

"In the next five years will be adding a second crowave channel which double existing capac Mr. Daly said. "We are ning a number of compler tary services which will clude pay-as-you-use grams and time sharing."

"Communications has a lion dollar market in Ca which will likely ex faster than Canada's omy," he said. "In re years our growth rate held to eight or nine per as telegrams became popular."

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